Cabinet Office (Management and Personnel Office)
Civil Service Medical Advisory Service

The Health of the Civil Service

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Preface

To the Chancellor of the Duchy of Lancaster

Sir
In 1968 the Civil Service Medical Adviser reported on the health of the Civil Service[1] from the viewpoint of a medical service which had then been in being for 24 years. In 1978 his successor described[2] subsequent changes in the type of work carried out by the Medical Advisory Service.

Continuing change and the response to it by the Medical Advisory Service (MAS) make it opportune to present a further report on the health of the Civil Service within the terms of the MAS remit. These are to 'advise departments regarding the health of individual officers . . . and on environmental and working conditions in relation to the health of the staff and hence the efficiency of the Service'.

There is a growing need for an easily accessible description of the work of the service to which management, staff and colleagues associated with the occupational health surveillance of civil servants can refer, which this report is intended to meet. A brief introduction is followed by chapters devoted to the main activities of the service supported where applicable by detailed appendices.

In presenting the report I am glad to acknowledge the contribution made by my medical, nursing and administrative colleagues.

Adrian Semmence
Civil Service Medical Adviser

Introduction

The main responsibility of the Medical Advisory Service during the first two decades of its existence was medical advice on recruitment, sickness absence, retirement and service overseas. This still occupies a lot of time—though there have been changes in the way in which it is now given.

Recruitment

The processes of recruitment by the Civil Service Commission have altered and there is now a much more direct relationship between the Medical Advisory Service and departments, to which the Commission has delegated the bulk of recruitment. This has led to increased efficiency. In 1983 there were nearly 7,000 requests for advice to MAS about the health of candidates for the Civil Service: 78 from the Commission and the remainder from departments. Routine pre-employment medical examination of all civil service candidates was replaced in the 1950s and 1960s by procedures which are effective and are economical of medical resources.[3] Sickness absence and medical retirement rates have not deteriorated as a result of these changes, and the scepticism of many physicians[4, 5] about the value of routine pre-employment medical examinations may well be justified.

Sickness absence

The existence of the Treasury Medical Service in 1948 was one of the factors involved in drawing up the agreement whereby civil servants on sick leave undertake not to claim sickness benefit in normal circumstances. The sickness absence of people in the employed sector in the United Kingdom is monitored by the social security part of the Department of Health and Social Security; that of civil servants by the Medical Advisory Service. Rates of sickness absence in the Post Office, which in 1948 was part of the Civil Service, have not paralleled the generally rising national trend over the past 30 years. This has been ascribed in part to the comprehensive procedures of control.[6] Post Office procedures are virtually identical to those in the Civil Service, where the national trend has also not been apparent. The majority of the 50,000 referrals made annually by departments about the health of individual civil servants are concerned with sickness absence. There is no evidence that the sick leave provisions enjoyed by the Civil Service are abused and there has been some overall decline in sickness absence since the large scale civil service surveys of 1967/68/69.

Retirement on medical grounds

Over 4,000 medical retirement certificates are issued annually by MAS for civil servants and employees of non-departmental public bodies. The rate of retirement on medical grounds has not varied significantly over the past 20 years, reflecting in part the comprehensive procedures of control which are applied.

Advice on service overseas

Assessment of fitness of civil servants to travel and work abroad, and advice and help to them, have from the beginning been important MAS activities. In 1983 over 3,000 civil servants and their dependants travelling overseas were examined, vaccinated and immunised by MAS staff.

Health indices

According to the indices currently available, the Civil Service is a healthy organisation. The premature death rate for the Home Civil Service, men and women, is between 50 per cent and 60 per cent of comparable age groups in the country at large (Tables A1, A2 and A3 of Appendix A, pp 18–20). Most serving civil servants can anticipate drawing their pensions for at least 13 years after retirement.[7] Sickness absence in the Civil Service is about half the national rate,[8] is going down and is lower than in comparable organisations such as the Post Office.[6] Only six in every thousand civil servants retire prematurely on health grounds each year and the total has varied very little over the past two decades.

These figures are so impressive that the question arises whether a medical advisory service, however economical, can be justified, particularly when the distribution of medical resources is a matter for concern[9] and bearing in mind that 40 per cent of the working population of the United Kingdom depends only on the Health and Safety Executive, legislation and first aid cover for its occupational health.[10] It is mainly on preventive lines, the prevention of disease associated with employment and the promotion of the health of employees, that an occupational health service—as MAS clearly sees its role to be—must be judged.

Promotion of health and prevention of disease

MAS has from the outset provided a service to deal with medical problems in individuals or in the working environment which had been identified by management or staff and, in the great majority of cases, to resolve them. Its preventive activities were, however, until the late 1960s confined mainly to the briefing, vaccination and immunisation of civil servants travelling overseas and to research into the causes of ill health in civil servants and Post Office employees. In the 1960s and 1970s these research activities were extended and attempts to implement the lessons learnt from the large-scale studies were made. The effect of intervention, particularly advice on stopping smoking, was assessed over prolonged periods with disappointing results[11] which have been replicated in other large-scale studies.[12]

There are many possible explanations for this and it would be quite wrong to assume that stopping smoking, taking exercise and modifying unhealthy dietary habits have anything but beneficial results. Evidence of the benefit of these measures is incontrovertible. However, from the viewpoint of an occupational health service it is possible that health education in the age groups concerned is ineffective or perhaps that the health agencies concerned are ineffective in altering employees' behaviour. The second possibility is one of immediate concern to MAS. If it is a strong one, and the large-scale civil service London survey of 1975–78 suggests that it may be so, then MAS activities must for the present be confined mainly to the prevention of work-related health problems—though this does not exclude individual opportunities for health education when they arise, as they do during the medical screening of various categories of employees.

MAS ability to act in the promotion of health and the prevention of disease has been greatly enhanced by the inauguration of an occupational health nursing service in April 1983. It will be in full operation by April 1985 and is making an important contribution to the work of the service.

There is much scope in the Civil Service for skilled occupational medical and nursing assistance in the prevention of disease. The bulk of civil servants are engaged in administrative, managerial and clerical duties of low potential hazard, though even in this sector some people (for example young female junior staff in unemployment benefit offices or job centres) do not match the commonly accepted stereotype of a civil servant. However, of the 600,000 or so civil servants and others in whose health at work MAS has particular interest, some 80 or 90 thousand work in areas of greater hazard. These include, for example, prison staff, coastguards, members of the security services, civil servants working in some posts abroad, scientists in research establishments, veterinarians and other Ministry of Agriculture, Fisheries and Food staff, and industrial workers in organisations such as the Royal Mint and the Forestry Commission. Protecting people in such work is a principal concern of MAS, and a number of occupational health problems dealt with recently are described in this report.

In undertaking its work MAS has three prime advantages to supplement the professional expertise and hard work of its staff. First, it has access to a panel of family doctors throughout the United Kingdom with a declared interest in occupational health problems. This form of organisation of occupational health services was endorsed by the Select Committee of the House of Lords reviewing the provision of health and hygiene services in the UK,[13] and MAS has increased its commitment to training its Local Medical Officers (all family doctors) in occupational health.

Secondly, MAS success in developing new techniques in occupational health surveillance can be measured against the performance of long-established services in the naval dockyards and other Ministry of Defence (MOD) establishments.

Thirdly, developing information technology in the Civil Service is improving the quality of MAS occupational health programmes. Central monitoring of morbidity can be refined and readier access to existing stores of civil service information achieved.

How MAS is meeting its existing commitments and addressing itself to the tasks ahead are the subjects of this report.

1 The work of the Civil Service Medical Advisory Service

Summary

Since 1723, when the Board of Customs and Excise first appointed a doctor on a part-time basis to care for Customs employees, the concept of medical care for civil servants has developed steadily. In the latter half of the nineteenth and the first half of the twentieth centuries the Post Office (traditionally a labour-intensive organisation and until 1969 part of the Civil Service) played a leading role in establishing the principle of providing a comprehensive medical advisory service for the benefit of government employees.

In 1948 the Post Office Medical Service merged with the newly formed Treasury Medical Service under the Treasury Medical Adviser to provide medical advice for the whole of the Civil Service.* Today, the Civil Service Medical Advisory Service (MAS) is responsible for occupational health provisions for half a million non-industrial civil servants employed at home and overseas, for 30,000 industrial civil servants and for 83,000 employees of non-exchequer bodies such as the Forestry Commission and Her Majesty's Stationery Office. The MOD (Procurement Executive) and MOD (Navy) have separate occupational health programmes for over 100,000 of their staff in research establishments, weaponry ranges, ordnance factories and dockyards.

MAS has been located within various central departments: the Treasury, the Civil Service Department and the Management and Personnel Office. In November 1982 it became part of the Cabinet Office (Management and Personnel Office) and has the title of the Civil Service Medical Advisory Service.

The MAS provides advice to departments on the medical aspects of recruitment, sickness absence and retirement; advice on environmental health problems, and on the particular problems associated with service overseas. Its work entails research into the causes of ill health among civil servants and establishing medical policies on such issues as smoking and alcohol abuse, visual display units and environmental asbestos levels, and the health standards of special groups such as firemen and coastguards.

The staff of MAS comprises 14 full-time doctors, headed by the Medical Adviser, 27 full-time occupational health nursing advisers and 16 part-time doctors working on a sessional basis. There are 1,350 Local Medical Officers and a panel of 250 consultant referees paid on an item of service basis. The

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* The Post Office became an independent corporation in 1969.

total cost of providing the services described above in 1983 was £1.75 million, or £3.75 for each employee for which MAS was responsible. Appendix B, Parts 1–5, lists the MAS staff as at 1 October 1984, describes the work of the Occupational Health Nursing Service, the work of Assistant Divisional Medical Officers and of Local Medical Officers, and outlines the training given to MAS staff. (See pages 21–29.)

Headquarters are in London at Petty France, Westminster, and there are divisional offices in Edinburgh and Manchester, with a further office soon to open in Cardiff—thus providing cover throughout the whole of the United Kingdom. As three-quarters of all civil servants live and work outside Greater London the pressures to decentralise MAS medical and nursing services are compelling.

2 Recruitment

Summary

All successful candidates for employment in the Civil Service are subject to enquiries about their health. It is in candidates for junior grades that the majority of health doubt cases arise.

In 1983 the Civil Service Commission withdrew from recruitment of grades at Clerical Officer level and below. The health assessment of successful candidates in these grades is now the responsibility of employing departments, taking advice from MAS medical and nursing staff.

Routine pre-employment medical examination for all successful candidates, as in the past, has not proved of great predictive value. It has now been replaced (except for recruitment to posts demanding a high level of physical fitness or mental stability) by a screening sift using detailed questionnaires. If the completed questionnaires show a clean bill of health the employing department may accept the candidate outright. In cases of health doubt the papers are referred to MAS.

MAS advise the department, in the light of the medical evidence, whether the candidate should be offered an established appointment or an unestablished (health) appointment subject to review after one to four years. After five years' regular and effective service, establishment is automatic. An independent appeal procedure is available to civil servants discharged for health reasons after serving more than one year.

Studies of sick leave patterns and staff wastage in the unestablished (health) group have confirmed that:

- even in a group of staff of below average health standards, health conditions do not play a large part in staff wastage within the first few years of service;
- overall, the unestablished (health) group take significantly more sick leave than the Civil Service average. However, the high average is because of a small number of staff in the health doubt category who take over 90 days' sick leave a year. With the exclusion of these people the rate of sickness absence for the unestablished (health) group is little more than the norm;
- the diseases causing sick leave in the case of the unestablished (health) group show a pattern similar to that existing across the whole Civil Service, and are not generally related to the reason for offering an unestablished apppointment.

The pre-employment medical enquiry procedure detects some people who go on to have above average amounts of sickness absence, and medical assessment may be of particular value in detecting neurotic illnesses, which affect a small proportion of staff but which pose disproportionate problems at work because of inefficiency and behaviour difficulties.

However, since only a fraction of one per cent of all candidates are rejected as a result of pre-employment medical enquiries, the Civil Service Commission has been making a survey into the need for pre-employment health checks.

The first year's sick leave record has proved the best predictor of future attendance rates. This underlines the need for line managers to observe closely health as well as performance during the normal probationary period, and for them to seek early advice from MAS in problem cases.

A detailed analysis of the medical aspects of recruitment into the Civil Service is given in Appendix C (see pages 30–39).

3 Sickness absence

Summary

A study of the patterns of sickness absence is an essential aid to the association of certain occupations with specific diseases and to the linking of particular medical conditions with possible problems of morale or environment.

Sickness absence monitoring is a fairly recent development, with government departments and public bodies taking the lead. Since the late 1960s several sample surveys have been carried out within the Civil Service and, in addition, statistics have been regularly collected on the Chessington computer system. The data from these sources point to the following conclusions:

- Age, sex and grade have a significant effect on sickness absence rates. Older people are off work longer than younger, women longer than men, and junior grades longer than senior.
- The average number of days' sickness absence by staff overall has shown a slight decline comparing 1983 with 1969. However, the balance between certificated and uncertificated sick leave has shifted. It appears that with the introduction of self-certificated sick leave there has been a dramatic drop in the number of staff taking medically certificated sick leave; uncertificated (now termed self-certificated) sick leave has increased somewhat but, overall, absence from work attributed to sickness has declined.

Sickness absence data at present are incomplete and not wholly satisfactory. Fuller information is now being obtained from the various civil service computer centres so that comprehensive and central monitoring of sickness absence patterns will become possible. One objective is to produce model sickness absence patterns against which managers will be able to assess whether the rates of sickness absence in their units fall within the expected limits for the age, sex and grade structure of the staff, the type of work being done and the buildings in which it is being carried out. Such a system will provide a useful early warning of possible occupational health problems in particular units.

A detailed analysis of sickness absence in the Civil Service is given in Appendix D (see pages 40–49).

4 Case referrals to the Medical Advisory Service

Summary

The number of case referrals to MAS in 1983 was of the order of 48,000, having dropped steadily from 54,000 in 1978. These referrals are analysed in detail in Appendix E, Part 1 (see pages 50–54).

The current guidelines for referring cases to the MAS can be summarised as follows:

- Departments should consult MAS in all cases where medical advice is felt to be useful, for example, where an individual's mental or physical condition, although not resulting in sickness absence, is causing inefficiency or misconduct or is constituting a risk to the officer concerned or to colleagues.

- Departments should not delay referring to MAS cases involving elements or risk, either to the individual concerned or to fellow workers.
- Departments should refer to MAS all cases of sick leave exceeding 90 days over a two-year period, provided they are satisfied that there is no likelihood of imminent return to work, and that the absences do not arise from a variety of unrelated causes not indicative of underlying ill health.
- Departments should refer to MAS reports of abnormally high sickness absence rates in units where there is no obvious explanation.
- Cases for retirement on medical grounds should be referred to MAS at the earliest possible stage.
- Departments should also consult MAS when they propose or receive a request to reduce an individual's hours for health reasons.

Some departments arrange for all individuals who are being referred to MAS to be seen first by the staff Welfare Officer so that a welfare report can be sent with the medical file. This is not an absolute requirement nor is it always possible but the report is often invaluable, and the Civil Service undoubtedly benefits from a close working relationship between the welfare services and the Medical Advisory Service.

A description of the liaison between departmental welfare services and MAS is at Appendix E, Part 2 (pages 55–57).

5 Retirement on Medical Grounds

Summary

Subject to the age and the length of service of the individual concerned, medical retirement can carry considerable benefits in terms of pension enhancement and immediate payment of pension and lump sum. There are a number of factors concerned with early retirement on medical grounds:

- The request for medical retirement to be considered may come from management, or, with medical support, from the individual.
- MAS decides whether the individual is eligible medically for premature retirement; and, if management decides to follow its advice (as it almost invariably does) MAS provides a medical retirement certificate.
- The retirement certificate must meet the requirements of HM Treasury's Superannuation Division and must state:

(a) the diagnosis;

(b) that the person concerned is prevented by ill health from discharging the normal duties of the post;

(c) that the effects are likely to be permanent.

- The Medical Adviser can request a report and seek an opinion from the individual's family or hospital doctor, the MAS Local Medical Officer or consultant referee, or can make a personal examination.
- If the Medical Adviser believes that the individual is not eligible for medical retirement he will notify the department accordingly. The matter will be reconsidered if at any time fresh medical evidence becomes available.
- The individual has the right to appeal to a Civil Service Medical Appeal Board against the decision reached.

While some medical retirement cases are straightforward, in that all the evidence points to a clear-cut decision, there are many that are more difficult to assess. These include cases involving backache, depression and alcoholism, neurotic and personality disorders, as well as those where resumption of work, even after serious illness, can have beneficial therapeutic effects.

Advising management on medical retirement issues and making the necessary enquiries and clinical assessments form a considerable part of the work of the MAS. Details are given in Appendix F (see pages 58–63).

6 Occupational Health—Environmental Aspects

Summary

Since its inception, MAS has been concerned with both the clinical and environmental aspects of occupational health medicine, but since the late 1960s calls for advice on environmental aspects of the work have greatly increased. The 1974 Health and Safety at Work Act has provided a statutory framework within which good health and safety practices in the workplace can be maintained and developed. It imposes duties on everyone concerned with work activities: employers, self-employed and employees; manufacturers, designers, suppliers and importers of materials for use at work, people in control of premises and, extending to members of the public, to follow the principles of safety, responsibility and safe working.

The good employer aims to provide a safe and healthy working environment; an occupational health service's contribution is to advise on the medical and nursing aspects of this provision. The work of the Civil Service involves a multiplicity of professions and trades and covers virtually the whole spectrum of professional, industrial, commercial and agricultural enterprise, together with occupations unique to the Service, such as those of Customs and Excise officers and Prison Officers. Many of these activities present potential occupational health hazards of varying degrees of severity, some of which are readily apparent, while others are difficult to identify. MAS concern is with the medical and nursing aspects of the control of recognised hazards, with the identification of hitherto unrecognised hazards, and with their assessment and prevention.

Since the mid 1970s MAS resources have been redeployed to respond to the increasing need for providing environmental occupational health advice; and a new occupational health nursing service, consisting of qualified and experienced occupational health nursing advisers, was set up in April 1983.

The working population for which MAS is responsible is scattered throughout the United Kingdom and many of the occupational health problems require local visits. Initial needs are to assess the degree of potential hazard and to allot priorities; to formulate and apply common policies, allowing scope for any necessary revision; to provide an internal MAS communications network for the central pooling and dissemination of locally obtained advice and experience; and to provide an occupational health information service for management and staff.

MAS advises managements on occupational health related problems, which include those caused by most of the chemical, physical and biological hazards to which such a diverse workforce is exposed.

In view of the size, the diversity and the widely scattered nature of the workforce, one of the most effective uses of MAS resources is to undertake training aimed at encouraging managers and staff to play a greater part in the development and maintenance of good occupational health practice. MAS has arranged health and safety seminars for senior managers and safety officers; it has also developed training courses for first aid instructors, who in turn will be able to provide a large number of civil servants with a sound training in occupational first aid.

Details of the work of MAS in the environmental aspects of occupational health are given in Appendix G (see pages 64–68).

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7 Civil Servants Abroad

Summary

In general civil servants working overseas depend upon the medical services of the host country for their primary medical care.

Some 6,500 staff, including officers from the Diplomatic Service, the Overseas Development Administration, the British Council and the Crown Agents, serve overseas. In addition many officers from the Home Civil Service may be seconded to overseas services or may be visiting overseas locations on short tours. MAS has a responsibility for all these and also for the health supervision of the families of staff working overseas.

MAS role in the care of civil servants abroad has broadly defined elements:

- a responsibility for the medical aspects of selection for overseas duty;
- supervision of, and advice in, primary medical care facilities;
- responsibility for the arrangement of evacuation on medical grounds if the need arises;
- responsibilities as primary care physicians for staff in transit; and
- the provision of health advice for travellers.

The standards of primary health care available vary greatly from country to country and, indeed, within particular countries. In instances of serious illness or injury of an officer or family member serving overseas a decision must be taken whether treatment can be carried out at the post or whether evacuation to another medical centre will be necessary. In reaching this decision, the MAS has to take many factors into account, including the nature of the ailment, family circumstances, the standard of local hospital facilities and the expense of the various options available.

Staff, normally serving overseas, who are in transit in the United Kingdom often find it difficult to get medical advice or attention from a family doctor. In such cases, MAS offers advice and arranges consultations in an attempt to establish continuity of medical care. The Medical Adviser may then be regarded by overseas departments as a sort of departmental family doctor, who possesses an additional understanding of the practical difficulties of a peripatetic life.

A daily immunisation clinic at MAS London headquarters has proved useful in advising travellers of changing immunisation needs. It has also provided, in the contact between nurse and patient, a useful informal opportunity for health education. More formal health education is provided by MAS training programmes on common health and stress problems related to the expatriate life. In 1983 3,000 vaccinations and examinations were performed at MAS headquarters at Tilbury House.

A detailed account of MAS responsibilities for civil servants travelling and working abroad is given in Appendix H (see pages 69–72).

8 Research

Summary

When the new Treasury Medical Advisory Service merged with the old established Post Office Medical Service in 1948, access was gained to a 'captive population' of more than half a million working people of both sexes between the ages of 16 and 65. This population, which included representatives of the majority of occupations in the United Kingdom, presented the opportunity for studies in social medicine to be carried out on a hitherto unprecedented scale.

Since 1948 a number of studies and investigations have been carried out. These range from large-scale investigations into the prevention of the common cold, to studies of stress and physical and mental breakdown, to investigations into the causation of coronary heart disease and the possible contribution of exercise to its prevention.

Since the introduction of Health and Safety at Work legislation, large-scale epidemiological surveys of medical disorders which are not particularly related to occupation have been supplemented by studies into the hazards associated with employment in the Civil Service. From an occupational hazard point of view, the Civil Service can be divided into three parts, with different levels of occupational risk.

- *Administrative, managerial and clerical.* These tasks occupy the majority of civil servants who constitute an homogeneous group at low risk. The occupational health problems of this group are those of establishing a comfortable working environment compatible with optimum efficiency, with attention focused on environmental and ergonomic factors such as heating, lighting and ventilation.
- *Groups of civil servants each with one or more specific occupational hazards*, such as those associated with operating vibrating tools. These individuals are often employed in an industrial or semi-industrial environment. There are specific problems also associated with work overseas.
- *The heterogeneous group of specialists working in scientific and technological establishments* who comprise the scientific civil service. No single industrial organisation can match the breadth of expertise and technology or the range of occupational health hazards in the scientific civil service.

The Civil Service is unique among large organisations in having three different occupational health programmes for its staff, organised in the case of dockyard workers by the Ministry of Defence (Navy), for a large proportion of employees of the Ministry of Defence by the MOD (Procurement Executive) Civilian Medical Services, and for the remainder of the Civil Service by MAS. A study, funded by the European Economic Community, began in January 1984 to examine the impact of differing occupational programmes in two establishments.

Studies based on civil service populations offer a number of advantages to epidemiologists and to occupational health physicians. In particular, civil servants constitute a large and relatively stable workforce, which is likely to be representative of the population in general.

A detailed review of research in the Civil Service is given at Appendix I (see pages 73–79).

9 The Future

The future of the Medical Advisory Service is closely bound up with the outcome of a forthcoming review of the health and hygiene services for civil servants. There are three different occupational health programmes in existence in the Civil Service, with some overlap and duplication of activities, and the planned review can be expected to lead to a sensible rationalisation.

All three programmes have similar objectives: to minimise the risks of work in the Civil Service and to promote the health of civil servants. There are different methods of achieving these objectives.

Promoting health

The majority of preventible causes of ill health and premature death of civil servants have very little to do with their jobs. Cardiovascular disease is a prime example; how to prevent it preoccupies medical services in all Western industrial societies. MAS experience following the large-scale studies in the 1960s and 1970s suggests that occupational health services are ineffective agencies in health promotion in cardiovascular disease. There are examples other than cardiovascular disease for which the provision of screening facilities at work has been postulated as desirable. These include diabetes, hypertension in middle-aged men, glaucoma and cancer of the cervix. It is accepted that around half of the more than 2,000 annual deaths due to cancer of the cervix in England and Wales are preventible, and MAS has been pressed to provide screening facilities at civil service workplaces. Our experience in the London survey between 1975 and 1978 suggests that this is not likely to be effective but we have agreed to institute further research to see if better educational techniques will improve the rate of response by women at risk. EEC funding for this study has been sought and its outcome may affect the ordering of priorities in health promotion by the MAS.

In the meantime we are maintaining our efforts to ensure that civil servants are aware of the hazards they may face at work and what can be done to minimise them.

Minimising the risks

The key to this objective is good information and good communication between the workplace and MAS, internally within the service, and between MAS and the civil servants for whom it is responsible.

Obviously the work of the new Occupational Health Nursing Service will expand considerably, and an expanded role for the 1,350 Local Medical Officers in the primary care sector can be foreseen. The possibility of supplementing their activities by occupational health visitors is something to be explored.

So also are improving the links between MAS and the existing safety officer network. Following the dissolution of the Civil Service Department a central personnel management function of co-ordinating health and safety legislation was allowed to lapse. Its reactivation under the aegis of MAS is at present under review. MAS is concerned with management in improving its intelligence gathering network. Links with first aiders, as MAS becomes increasingly involved with arrangements for training, will form a part of the wide intelligence network required to promote the health and minimise the risks of a scattered workforce exposed to a wide range of possible hazards. Regular consultation with the civil service trade unions also contributes to MAS work in this, as in many other fields of interest.

Another development is the construction of a sickness absence model, using a much larger denominator than has currently been available, which will consist of over three-quarters of the population of the Civil Service. This model will make it possible for MAS to advise managements of standard rates of absence taking into account the age, grade and sex structure of their establishments so that high levels can be investigated from the medical, as well as the personnel management, viewpoint.

There has already been a great deal of progress in delineating the role of the medical and welfare services, with whom we have had close links since the beginning. The move to reconstitute the central health and safety personnel function within MAS is a case in point. So too is the emphasis being placed by the occupational health nursing arm of MAS on high quality first aid training arrangements, hitherto the province of the welfare services. Functions which have been undertaken in the past on an *ad hoc* basis by MAS, such as training in counselling, may more properly lie within the province of the welfare service, and this is being explored. There is good sense also in a joint approach to health education in diseases which may not be primarily occupationally related.

Occupational health records

Two other interrelated factors will affect the provision of MAS services. These are the acquisition of adequate environmental data and their linking with medical records—for example, how to ensure that a doctor responsible in the future for the care of a retired civil servant is aware of his exposure to a chemical, physical or biological hazard during his civil service career. Medical records of civil servants have, since the beginning, formed part of the personnel record. This arrangement has sometimes created anxiety because of possible threats to the confidentiality of medical data, though we are now confident that these anxieties are misplaced. The personnel file follows the civil servant throughout the person's career and is retained, usually for 30 years, after leaving. The possibilities of transmitting important clinical and environmental data to the doctor responsible for the individual after he or she has left the Service are obvious. MAS is experimenting, in consultation with departments and the trade unions, in ways of annotating personnel records with details of exposure to hazards, apart from those whose recording is statutory.

The recent reorganisation of the Property Services Agency, which is responsible for the safe environment of civil servants working in government buildings, provides an opportunity of pursuing this line of enquiry further.

Information processing

Developments in information systems and technology and the greatly increased volume of data to be handled will require an expansion of current processing facilities in MAS. A minicomputer is scheduled to be installed in April 1985, and an internal data and memory bank for MAS will be developed. Information concerned with the health at work of civil servants may be found in a number of different locations and disciplines, and there will be considerable benefit from a more systematic organisation and exploitation of the data now becoming available.

Charging for MAS services

MAS can now offer a full range of occupational health services, and these are the basis of charging non-departmental public bodies. Research units, for example, which have employed local general practitioners to provide a day-to-day service but refer to MAS when it comes to retiring individuals on medical grounds, can now be offered a complete service. The cost, based on the full economic cost of the service will be £3.75 per employee annually, from October 1984. The take-up of this offer by the 83,000 employees of non-departmental public bodies in whose health at work MAS has a current interest will obviously have an effect on the future of the service.

One of the seven major objectives of the Cabinet Office (Management and Personnel Office) for the 1984/85 financial year is to provide efficient and cost effective central services to meet the needs of government departments. Work in support of this objective includes further consideration of the scale for increasing the number of services provided to departments on repayment terms. These might include services in the field of occupational health.

It is not at present possible to say which of these future developments will have the greatest effect on the direction of MAS. It is however clear that the effectiveness with which MAS continues to provide the services detailed in this report, and how successfully it retains the confidence of management and staff, will be the major determinants of its future.

APPENDIX A

MORTALITY RATES IN CIVIL SERVANTS

Table A1: Death rates,* deaths, expected deaths and standardised mortality ratios

Non-industrial Home Civil Service

	Crude death rates				1980 Deaths		1981 Deaths		1982 Deaths		1983 Deaths	
	1980	1981	1982	1983	observed	expected	observed	expected	observed	expected	observed	expected
Men												
Aged 15–29	0.5	0.5	0.4	0.6	35	60	37	57	29	55	37	51
30–34	0.8	0.7	0.6	0.6	30	35	27	35	22	35	20	33
35–39	1.3	0.8	0.8	0.6	37	41	26	41	26	42	21	46
40–44	1.7	2.0	1.6	1.3	43	63	53	62	42	61	36	61
45–49	3.2	3.3	2.5	2.3	85	120	88	114	65	107	59	108
50–54	5.9	5.4	5.3	4.4	199	275	173	252	162	231	127	210
55+	11.5	10.1	9.9	9.5	793	1,254	651	1,139	574	1,014	500	918
All ages	4.2	3.7	3.3	3.0	1,222	1,848	1,055	1,700	920	1,545	800	1,427
Women												
Aged 15–29	0.4	0.2	0.3	0.3	48	42	27	40	28	38	27	36
30–34	0.6	0.4	0.6	0.2	12	13	8	13	13	13	5	12
35–39	1.1	0.4	0.5	0.7	20	19	7	18	10	18	14	18
40–44	0.7	0.7	1.5	1.2	13	30	14	31	29	29	22	28
45–49	1.7	1.9	1.8	1.3	38	64	41	60	36	54	25	51
50–54	3.0	3.1	2.7	2.5	86	136	83	128	68	115	60	106
55+	4.6	4.7	4.3	4.2	195	413	195	392	167	377	151	345
All ages	1.6	1.4	1.4	1.2	412	717	375	682	351	644	304	596
Standardised mortality ratios					**Men** **Women**	66.1 57.5		62.1 55.0		59.1 54.5		56.1 51.0

*Death rates per 1,000 staff in sex and age group.

Source: MANDATE†

†See page 59

MORTALITY RATES IN CIVIL SERVANTS

Table A2: Death rates,* by age and grade level: 1982, men

Non-industrial Home Civil Service

Grade levels:	Senior[1] Management	Directing grades	Asst.[2] Sec.	Sen.[3] Prin.	Prin.[4]	SEO[5]	HEO[6]	EO[7]	CO[8]	CA[9]	All grades
Age											
15–29	—	—	—	—	—	—	—	0.2	0.5	0.8	0.4
30–34	—	—	—	—	—	0.4†	0.4†	0.7	0.8	—	0.6
35–39	—	—	3.2†	—	0.5†	0.6†	0.4†	0.5	1.4	6.1	0.8
40–44	—	—	—	—	2.1	1.3	0.9	1.5	2.9	1.5†	1.6
45–49	—	—	—	—	0.5†	2.5	2.4	1.8	4.3	3.9	2.4
50–54	—	16.4†	3.1†	8.7	3.3	3.6	4.8	5.7	6.8	6.5	5.3
55 & over	14.6	6.8†	5.7	1.8*	6.4	7.2	7.5	9.7	13.3	14.4	9.9
All ages	5.7	8.4†	3.3	2.7	2.7	3.1	2.9	2.9	3.8	4.8	3.3

*Deaths per 1,000 staff in age group and grade level.

[1]—Under Secretary (3) and above
[2]—Assistant Secretary
[3]—Senior Principal
[4]—Principal
[5]—Senior Executive Officer
[6]—Higher Executive Officer
[7]—Executive Officer
[8]—Clerical Officer
[9]—Clerical Assistant

†Based on one, two or three deaths only.

MORTALITY RATES IN CIVIL SERVANTS

Table A3: Death rates,* by age and grade level: 1982, women

Non-industrial Home Civil Service

Grade levels:	Senior management	Directing grades	Asst. Sec.	Sen. Prin.	Prin.	SEO	HEO	EO	CO	CA	All grades
Age											
15–29	—	—	—	—	—	—	1.1†	0.3	0.2	0.3	0.3
30–34	—	—	—	—	—	—	—	0.5†	0.7	0.8	0.6
35–39	—	—	—	—	—	3.6†	0.9†	0.2†	0.6	0.3†	0.5
40–44	—	—	—	—	—	—	1.4†	1.0†	1.5	1.9	1.5
45–49	125.0†	—	—	—	10.4†	9.1†	2.0†	1.9	1.7	1.5	1.7
50–54	—	—	—	1.4†	7.6†	10.2†	3.0†	3.7	2.2	2.6	2.7
55 & over	—	—	—	—	—	—	4.2	2.8	4.3	4.8	4.3
All ages	3.2	—	—	2.9†	2.1†	2.9	1.6	1.1	1.3	1.6	1.4

*Deaths per 1,000 staff in age group and grade level.
†Based on one, two, or three deaths only.

APPENDIX B

THE WORK OF THE CIVIL SERVICE MEDICAL ADVISORY SERVICE

PART 1: MEDICAL AND NURSING STAFF
(1 October 1984)

Headquarters—Tilbury House, Petty France, London SW1H 9EU

Medical Adviser	Dr A M Semmence
Deputy Medical Adviser	Dr P J Constable
Principal Medical Officer	Dr M L E Espir
Senior Medical Officers	Dr E Muriel Brown Dr A J Haines Dr E Mirian Jones Dr Ruth Lloyd-Thomas Dr R K Rowntree Dr K W Woolhead

Manchester Divisional Office—4th Floor, Boulton House, Chorlton Street, Manchester M1 3HY

Senior Medical Officer	Dr G Dalton
Medical Officer	Dr B V Lee

Edinburgh Divisional Office—18–20 Hill Street, Edinburgh EH2 3NB

Senior Medical Officer	Dr H F V Riddle
Medical Officer	Dr K T Gruer

Cardiff Divisional Office—Temporary address, c/o Employment Medical Advisory Service, Room 1307 Brunel House, 2 Fitzalan Road, Cardiff CF2 1SH

Medical Officer	Dr W R Watkins

Occupational Health Nursing Service

Headquarters

Senior Occupational Health Nursing Advisers (SOHNA)	Mrs A Barley Mrs C Cholerton Miss Judith Cook Mrs G F Thornbory

Occupational Health Nursing Advisers (OHNA)	Miss J James Miss Ann Jones
Manchester Divisional Office	
SOHNA	Mrs M McInnes
SOHNA	Miss P Howarth
OHNA	Miss R Saplywyj
Edinburgh Divisional Office	
SOHNA	Mrs E Moore
OHNA	Mrs L Craig
Cardiff Divisional Office	
SOHNA	Mrs I R G Norman
Swansea	
Charge Nurse	Mr K Griffiths
Llantrisant	
OHNA	Mrs I Porter
Sister	Mrs W Hall
Cheltenham	
OHNA	Mrs M Ogden
Sister	Mrs M Nuttall
Southampton	
OHNA	Mrs A Gasson
Sister	Mrs H Horner
Lytham St Annes	
OHNA	Mrs M Naylor
Durham	
OHNA	Mrs C Bryson
Glasgow	
Sister	Mrs F M W Hutton

Assistant Divisional Medical Officers working on a sessional basis

Blackpool	Dr D J Barlow
Bristol	Dr R West

Cardiff	Dr J N Parry
Frodsham	Dr G H J Dickinson
High Wycombe	Dr J J McMullan
Isle of Wight	Dr C N A Mobbs
London	Dr E H Burgess
	Dr D G Craig
	Dr K J Dunlop
	Dr J R Muir
Manchester	Dr Margaret McCaffrey
Newbury	Dr S Chapman
Norwich	Dr P D Knights
Stockport	Dr B K W Lightowler
Weybridge	Dr C R Walker
Woking	Dr E G M Cameron

1,350 Local Medical Officers (general practitioners paid on an item of service basis) are located throughout the United Kingdom.

PART 2: OCCUPATIONAL HEALTH NURSING SERVICE

Occupational health nursing has been known in the United Kingdom for over one hundred years, and most large organisations have nationwide occupational health nursing services. Specialist training was introduced in 1934.

The qualification (Occupational Health Nursing Certificate) was recognised in legislation when the first aid regulations for all work places were published in 1981.[14] Flexibility in these regulations was allowed only where an occupational health service was headed by a doctor or qualified occupational health nurse.

Nurses were first introduced into MAS in London in 1972 to assist in screening procedures and immunisation. They proved their value, and by 1980 it was recognised that they could make a greater contribution to the health of civil servants if they had specialist occupational health nursing training.

MAS nurses willingly undertook the specialist training with excellent results and were thus enabled to participate in a much wider range of duties mainly concerned with the prevention of illness and injury at work and the maintenance of health.

As well as the MAS nurses in London there were others in departments throughout the country, employed mainly on first aid and treatment. Although some of them had received specialist training their work was circumscribed by the lack of professional support. In April 1983 over 20 of these posts were brought into MAS and, where necessary, the nurses were offered specialist training.

The plan was then to establish on the basis of these posts an occupational health nursing service staffed entirely by qualified occupational health nurses, in line with the best of modern practice. Recent research has demonstrated convincingly that nurses who are qualified in the speciality are of particular value to their employers.[15]

The service is running on a peripatetic basis with occupational health nursing advisers visiting departments. This is very different from the old system where some departments employed nurses who were neither allowed nor equipped to do much more than to render first aid and treatment and where others had no access to occupational health professionals. Naturally, departments which had always had a nurse on site were somewhat apprehensive about the change to a visiting service. The nurse, though undertaking a much wider range of occupational health duties, would not always be on site. It was fortunate that the departments experiencing the change from a nurse-on-spot service were so willing to co-operate and make it a success. Very quickly the concept of trained and informed first aiders supported with local guidelines and having direct contact with emergency services and a competent occupational health nursing adviser was understood and appreciated.

This is in line with the Health and Safety Executive's view that, to be effective, the occupational health nurse should be relieved of duties that can be carried out satisfactorily by an appropriately trained first aider.[16]

Modern first aid is based on the principle that in emergency action can be taken by the nearest person. It is therefore better to train first aiders and helpers in every department. The nursing service is active in advising on first aid arrangements and practice. Where appropriate, first aid instructors are being trained by occupational health nursing advisers so that all who wish to learn life saving procedures within the Civil Service can have an opportunity to do so.

Occupational health nursing advisers undertake much of the work concerned with delegated health recruitment. Their knowledge of the jobs in the Civil Service and their increasing familiarity with the departments throughout the country are essential for this part of the work.

During tours of departments a systematic record of environmental conditions is made and can be maintained on an up-to-date basis. Hazards are investigated with MAS doctors and, where necessary, surveys are carried out.

As the occupational health nursing service establishes itself and departments become accustomed to regular visits the occupational health nursing advisers will make an increasing contribution to resettlement and rehabilitation of staff. The useful rapport with the welfare service will make for speedier action in individual cases of need.

The duties that have been carried out for the last ten years in MAS—the immunisation clinic in Tilbury House and assistance to doctors in medical examinations—continue. Some 3,000 immunisations are carried out annually and major conferences such as the Economic Summit in London in June 1984 are provided with MAS medical and nursing cover.

PART 3: THE WORK OF ASSISTANT DIVISIONAL MEDICAL OFFICERS

In 1980 agreement was obtained for a limited number of part-time medical posts throughout the UK. The object was to improve the quality and accessibility of MAS advice locally both on the health of individuals and on general occupational health issues.

Dr Geoffrey Dickinson, who is in family practice in Frodsham, Cheshire, gives his impressions of the work of an ADMO.

> In June 1981 I was recruited by the Civil Service Medical Advisory Service as one of the first part-time members of their staff, with particular responsibility for the Department of Employment and Manpower Services Commission throughout most of Great Britain. Originally as a Treasury Medical Officer and then as a Local Medical Officer, I had for many years worked occasionally for the Civil Service but had no experience of formal occupational health—if one excludes national service in the RAF and an interest in Aviation Medicine as an approved examiner for the Civil Aviation Authority.
>
> My duties are, firstly, to advise personnel management about general and particular aspects of a case, including prolonged sickness absence, recommendations on further paid sick leave, the necessity for preferential duties as a rehabilitative or permanent measure, part-time working and other adaptations of working conditions. Second, I have to give a general assessment of the present medical condition, working capacity and prospects of rendering regular and effective service in the future. Other duties include specific advice to management on environmental problems and potential health hazards including infections, diseases and other cases which might occasion risk to colleagues; full medical assessment as required, including periodic medical examinations for driving; advice on the medical aspects of probation and trial periods at work; and liaison with the department's Welfare Officers.
>
> My brief is restricted to some extent, and does not include the endorsement of ill-health retirement with all its financial implications, or cases which are difficult because of political or union interest, where the greater experience of the Divisional Medical Officers in handling complicated cases

would be necessary; in fact all those areas in which my lack of knowledge mean that I would have to refer to specialist members of the service.

The most straightforward problem is the evaluation of medical certificates provided by employees and, because of experience acquired as a principal in general practice, I have an insight into people's complaints and family doctors' reaction to them. I therefore have an understanding of the diagnosis that family doctors might attach to the certificates and particularly of those rather fudged ones which I myself might have used as a 'kindly family doctor', helping an essentially deserving person. We have all acted as our own social arbiters at times!

A problem presented by management about an individual's sickness absence is accompanied by three main sources of information. There is a card with the details of all the sickness absences that the officer may have experienced for some years; an up-to-date management report, with exact details of the work involved and of the mode and time of travel to work, a statement of the officer's general abilities and relationships with colleagues and, lastly, reports from the departmental Staff Welfare Officer. These latter are most informative, dealing not only with the conditions under which the officer is working but including family problems, marital problems, housing conditions and also medical problems as described by the patient. I find it fascinating to see the other side and to be given the patient's view of what is happening to them and what they have been told. We have often been told that at the most three facts are retained by a patient after any consultation, and this is amply borne out by what they tell the Staff Welfare Officer.

Settling down with a file armed with a request for an opinion and these three pertinent reports, I find relatively little difficulty in giving what I presume to be sensible advice. If I have a problem and, with the reports in front of me, am still unable to reach a decision as to the advice I should give management, I ask the family or hospital doctor for a report, having received permission to do so from the individual concerned. Often these reports are penetratingly helpful but, sadly, occasionally very deficient. I find it upsetting that I have little discretion in the amount paid for these reports because there is no allowance for the great variation that one finds, the scale of fees being agreed with the British Medical Association. Where such reports have not helped in resolving the problem I may then refer the case to the Local Medical Officer. The Local Medical Officer's report is of great value when the patient has poor contact or is unwilling to contact his family doctor. Among large numbers of working people there is bound to be the odd person who will not co-operate, though when I ask for such an examination the individual seldom refuses. It behoves Local Medical Officers, I believe, to provide a fully detailed report of the examination. It is of great importance and should be treated by them as seriously as a report to an insurance company or a lawyer. Insurance companies nominate individual examiners and if the companies become disenchanted drop them quietly from their lists. I wonder if the Civil Service should do the same?

In my work as an ADMO I understand the need for specialist occupational health physicians. They are colleagues to whom I can refer problems of toxicology, radiation hazards, statistical analysis and others which need specialist expertise. On the other hand there should be recognition by the specialist of the primary health occupational physican whose own knowledge and expertise is necessary for the individual's well-being. There has been over recent years a great increase in the willingness of the specialist to help the post-graduate training of the family doctor and increasingly for family doctors to help each other in raising standards of knowledge and in keeping up to date. I would ask that specialist full-time occupational physicians should not look inwards but rather outwards in spreading knowledge and attempting to train and help the family doctor with the problems he meets daily. My experience as an ADMO demonstrates repeatedly the place of primary occupational health care, in relation to the effect of work on health and the effect of health on an individual's capacity for work.

PART 4: THE WORK OF LOCAL MEDICAL OFFICERS

The Medical Advisory Service inherited from the Post Office Medical Service the network of local general practitioners set up so that employees could be examined in or near their home area when questions on health required a medical opinion. In 1936 there were 2,600 LMOs. Since 1948 the number has been allowed to decrease to its current 1,350.

A register of LMOs is held by government departments and a number of public bodies and is updated regularly. The Departments of Education and Science and of Transport, for example, use the register when making arrangements for the examination of teachers and of drivers.

The LMO is expected to understand civil service regulations and to take them into account in giving his opinion. Duties include the examination of applicants for civil service employment and examining and reporting to full-time MAS medical staff on the health of civil servants who have prolonged or frequent sickness absence, whose efficiency and behaviour at work have been adversely affected (possibly on account of mental or physical ill health), who may have certain diseases or disabilities which could be a source of hazard to themselves or their colleagues, whose health may be affected by factors related to their duties, or whose fitness for certain special duties, for example, as a driver or a coastguard, needs to be determined. Fitness for service overseas and that of dependants needs to be ascertained. In addition, when officers are taken ill at their place of work the nearest LMO may be asked to render help.

The register of LMOs has recently been overhauled. The objective is to have a smaller number of LMOs more evenly distributed, better trained and fully aware of the problems of the workplace and of the employee. Their work has lessened because of diminished civil service recruitment and also because of a change in MAS policy whereby the individual's general practitioner is more often asked for information.

PART 5: TRAINING

Full-time MAS medical staff

In recent years doctors without specialist qualifications in occupational medicine have undertaken training in the discipline. Three posts (one in Manchester and two in London) are recognised for training by the Faculty of Occupational Medicine and the Joint Committee on Higher Medical Training of the Royal College of Physicians (RCP).

Assistant Divisional Medical Officers

It is difficult for family doctors to take formal qualifications in occupational health on a part-time basis. The Distance Learning Course instituted by the University of Manchester will help to solve the problems. The changes planned in the requirements for the Associateship of the Faculty of Occupational Medicine of the RCP will also make things easier.

Local Medical Officers

On appointment an LMO is sent a booklet giving general civil service information, a summary of duties and guidance on the type of report required. A recent development has been visits by full-time medical staff to discuss problems.

Two-day training courses have been held biennially since 1982 in conjunction with university departments of Occupational Health or General Practice, each attended by some 40 or 50 LMOs. They are open to all family doctors and have some general occupational health content as well as material specific to the Civil Service. Shorter courses especially for Local Medical Officers have been designed, and, in conjunction with the Merck, Sharp and Dohme Foundation, a video film has been made to help in training.

Training in occupational health nursing

Specialised training in occupational health nursing has been available since 1934 when it was recognised that nurses required further training to help them make the transition from the bedside to the workplace. There is a need to shift the emphasis from care and cure to the prevention of illness and injury due to work.

The training involves workplace monitoring, assessment of health in relation to work, work-directed health education, the use of elementary statistics and epidemiology and an acquaintance with relevant legislation. It leads to the Occupational Health Nursing Certificate (OHNC). Nurses brought into MAS from other parts of the Civil Service were all given the opportunity of specialist training leading to the OHNC.

In-service training aims to supply the extra skills and information needed to fulfil the special requirements of the Civil Service and to keep abreast of developments. In the induction period, training is given in screening procedures. Knowledge and skills are kept up to date by short in-house courses, and good use is made of courses which are open to all civil servants such as those on public speaking and report writing.

Individual specialisation is encouraged and as the Occupational Health Nursing Service develops, it aims to achieve and maintain a service able to respond to each new health requirement in the Civil Service.

The Medical Advisory Service is approved as a recognised centre under the Health and Safety Executive for first aid training.

APPENDIX C

RECRUITMENT

All successful candidates for employment in the Civil Service are subject to enquiries concerning their health. Until January 1983 this function was undertaken centrally by the Civil Service Commission taking advice from the MAS, but since then the Commission has withdrawn from the recruitment of employees up to Clerical Officer or equivalent grades. Assessment of the health of those candidates is now the responsibility of individual government departments and all civil service medical and occupational health nursing advisers are involved in it.

Pre-employment medical examinations

Prior to 1949, pre-employment medical examinations were commonplace in the Civil Service but in that year were abandoned for all grades up to Executive Officer (then two-thirds of the total staff) except for posts where special physical qualifications were required and for those liable for service overseas. Since then the need for examination has been progressively reduced and the statement by the Medical Adviser in 1974[3] that pre-employment medical examinations for the great majority of entrants are not justified has been repeatedly endorsed. Examination of sickness absence, medical retirement and mortality data over the years since then has shown no effects which could be attributed to this relaxation of medical requirements. Indeed evidence now emerging, for example, on the occurrence of episodes of cardiovascular disease in people with multiple risk factors[17] endorses the lack of predictive value of routine pre-employment examinations. They have therefore been abandoned in favour of a screening sift by means of a detailed health questionnaire. When this is clear departments may accept the candidate outright, but if there is any doubt about health the recruitment papers are referred for advice. MAS occupational health nursing advisers undertake preliminary review of case papers and make arrangements for medical examinations of candidates by Local Medical Officers or consultant referees. Reports may also be sought from the candidate's general practitioner or hospital specialist. For certain posts a medical examination is still mandatory. In the light of all the available information, medical advice is given to departments as to whether the candidate should be offered an established appointment or an unestablished appointment with a health review after an interval of one to four years. After five years of service establishment is automatic.

Over the years the health standard for employment has been progressively lowered and now the expectation of only five years regular and effective service is required. This is not long, and even candidates with known disability or illness may be able to meet the standard. Only if there is a history of continuing, significant illness which would be likely to give rise to above-average sickness absence is the applicant likely to be rejected for employment. An appeal procedure is available to those officers discharged for health reasons after being in post for more than one year. In 1983 there were ten appeals by civil servants appointed on unestablished (health) terms against their discharge on medical grounds to a Civil Service Medical Review Board. (This consists of a Chairman appointed from a panel of consultants nominated by the Royal Colleges of Physicians and Surgeons together with a consultant nominated by the Chairman.) In three cases the appeal was allowed.

Table C1, page 34, shows the number of candidates rejected by the Commission and by recruiting departments on the basis of MAS advice in 1983.

The high proportion of referrals by departments and the higher rate of rejection of these candidates are not unexpected. It is the clerical and equivalent grades, in which the bulk of health problems are found, which have the highest rate of sickness absence and which have one-and-a-half times the premature death rate (from all causes) of executive grades, and three times the rate of senior (principal and above) grades.[18]

Unestablished (health) appointments

In a survey of the 1,143 candidates who were unestablished on acount of doubt about health, taking up appointments beween April and October 1978, 96 per cent were seeking clerical grade posts.

A study of their sickness absence records for one year following recruitment was undertaken to make comparisons with the Civil Service as a whole and to ascertain whether the health of those appointed broke down subsequently or remained satisfactory and led to eventual establishment. The survey comprised 462 men and 681 women. Half of the women were less than 25 years old and 61 per cent were under 30 years, whereas 30 per cent of men were over 50 years old compared with only 8 per cent of women.

After three years, of those offered unestablished (health) appointments 46 per cent remained in the Service. Only 2 per cent had their appointments terminated for medical reasons, constituting 5 per cent of the total leaving within the three years, 56 per cent of whom resigned or retired for other personal reasons. Health therefore does not play a large part in the loss of staff within the first few years, even in a group considered to have below average health. A similar proportion of both male and female registered disabled were still in post after three years, confirming that many handicapped people may have acceptable sick leave records.

Over 30 per cent had no absence due to sickness (Table C2, page 34 and Figures C1 and C2, pages 37 and 38), and 42 per cent had no uncertificated sickness absence during the first year after recruitment.

Nearly 70 per cent of the group had three or less spells of sickness absence in the year and 77 per cent had three or less uncertificated spells. Overall, however, the unestablished (health) group had twice as many spells of sickness absence as other civil servants, using the studies in the Ministry of Defence and elsewhere as a yardstick (see Appendix D, pages 40–49).

Of the group 59 per cent took less than ten days of sick leave, 6 per cent took between 45 and 90 days and 3.7 per cent took more than 90 days. This latter group was mainly responsible for the high overall average in the year and if their sickness absence is excluded, the average number of days of sick leave is reduced to ten for men, 14 for women and 13 overall, little more than in the Civil Service as a whole. The average sick leave of the Civil Service as a whole is also skewed by a small proportion of employees taking very long spells of sickness absence. It is these small groups with which MAS is most concerned. From the recruitment standpoint no clinical screening examination, even the most stringent, seems to have much predictive capability and there is widespread support for the view that the best predictor of sickness absence is past sickness absence. Accurate data on this, unless the individual has been employed by the organisation before, appears to be almost unobtainable.[5]

The average number of days sick leave per person is shown in Table C4 (page 35).

The diseases to which absence was attributed showed a pattern similar to the Civil Service as a whole and were not generally related to the reason for offering unestablished appointment (Figure C3, page 39 and Table C5, page 36).

Respiratory disorders accounted for nearly 40 per cent of the spells of sick leave and 23 per cent of days lost due to sickness but were the reason for offering unestablished appointments in only 12.8 per cent. Musculoskeletal problems accounted for only 4.2 per cent of spells and 4.1 per cent of days off sick but were the reason for doubt about health in 15.2 per cent. Accidents and injury, an insignificant reason for unestablished appointment (0.8 per cent), caused 10.9 per cent of spells and 15.3 per cent of days off sick. Neurotic illness caused a rather smaller than expected proportion of sickness absence.

Ill-defined disorders such as 'fatigue', 'debility' or 'social reasons' formed 10.4 per cent of the spells and 10.2 per cent of the days away from work. Such absence usually shows up in a pattern of irregular attendance and is unlikely to be detected by a pre-employment medical examination.

Only 7.1 per cent of men and 14.6 per cent of women in the study were off sick because of conditions linked with the reasons for offering them unestablished appointments. The conditions for which sickness absence matched most closely were: congenital abnormalities (100 per cent); hypertensive disease (75 per cent); and ischaemic heart disease (60 per cent).

Altogether, however, these conditions only formed one per cent of the total spells of sickness absence. Respiratory disorder, the commonest cause, only matched in 3.3 per cent of spells and 5.4 per cent of days off; there was better matching (40 per cent) for spells of bronchitis and asthma, a tendency to which might have been detected prior to employment. Neurotic illness, accounting for 4 per cent of certificated spells, matched in 46 per cent of cases. There was no matching for psychotic illness, responsible for less than one per cent of days of sickness absence. However, the study was of one year's figures only, and psychoses may exist for several years before sickness absence ensues. Similarly, although musculoskeletal disorders resulted in health doubts in 15 per cent of individuals and matched the cause of sick leave in 37 per cent, they were responsible for only 4 per cent of all sickness absence.

The pre-employment medical enquiry procedure does detect some of those who go on to have above average amounts of sickness absence. A medical assessment may be of some value in the detection of the candidate suffering from neurotic illness, even though such disorders only formed eight per cent of the total days lost attributed to sickness. Neurotic illness however can be a cause of other problems at work such as inefficiency or behaviour difficulties.

Only a fraction of one per cent of all candidates are rejected as the result of medical enquiries. The Civil Service Commission has been making a survey into the need for pre-employment health checks and has been reviewing the practice of a number of major employers.

For the successful candidate the first year's sick leave record is the best predictor of future attendance. Excessive time away for respiratory infections, accidents, neurotic illness and vague disorders usually shows up within a year and appropriate action can be taken.

Close observation during the usual probationary period may be more effective than pre-employment medical examination in identifying those who are unlikely to meet the recruitment standard, and underlines the need for line managers to take health as well as performance into account during this period, and to seek early advice from the Civil Service Medical Advisory Service when indicated.

Table C1: 1983 Recruitment

	Civil Service Commission[1]	Departments[2]
Number recruited	4,886	26,000[3]
Number referred to MAS for advice	78 (1.6%)	5,178 (20%)
Number offered unestablished (health) appointment	68 (1.4%)	955 (3.7%)
Number rejected	10 (0.2%)	100 (0.4%)

[1] Executive officers (and equivalent grades) and above.
[2] Delegated recruitment grades.
[3] Estimated (accurate figures for industrial grade recruits are not available).

Table C2: Proportion of staff taking no sick leave

	Male %	Female %	All %
Unestablished (health) staff, total sick leave 1979	38.3	24.5	30.1
Civil Service survey, total sick leave 1969	34.8	19.3	28.6
Ministry of Defence study, total sick leave 1978	40	17	34

Table C3: Average number of spells of sick leave per person

	Certificated			Uncertificated		
	Male	Female	All	Male	Female	All
Unestablished (health) staff 1979	0.92	1.38	1.2	1.58	2.49	2.1
Civil Service survey 1969	0.58	0.94	0.72	0.93	1.54	1.0
Ministry of Defence study 1978	0.4	0.92	0.54	0.93	1.8	1.1
Home Office study 1978/79	0.43	0.79	0.63	0.87	1.35	1.1

Table C4: Average number of days of sick leave per person

	Male	Female	All
Unestablished (health) staff 1979	14	19	17
Civil Service survey 1969	9.5	13.4	11
Ministry of Defence study 1978	6.2	11.9	7.7
Home Office study 1978/79	5.9	11.4	8.9
Chessington 1979	8.5	13.3	10.5

Table C5: Condition as a percentage of spells of certificated sick leave

	Unestablished (health) 1979	Civil Service 1969	Ministry of Defence 1978	Home Office 1978
Bronchitis, asthma	7.0	17.3	4.2	46.1
Other respiratory disorder	31.4	26.3	30.7	
Infections	11.8	*	*	*
Musculoskeletal	4.2	4.8	6.1	5.4
Accident, injury	10.9	6.0	4.0	7.2
Neuroses	4.0	2.5	1.2	2.6
Psychoses	0.1	6.0	4.0	0.3
Gastrointestinal disorder	5.0	6.0	4.0	6.9
Ischaemic heart disease	0.5	0.5	0.4	0.3
Other cardio-vascular disorder	1.6	1.6	1.3	1.7
Ill-defined disorder	10.4	3.4	27.4	3.2
Other conditions	13.0	31.7†	20.7†	26.8†

*Included under 'Other conditions'.
†Including infections.

Figure C.1 Spells of sick leave during the year following recruitment taken by 1,143 unestablished staff April – October 1978

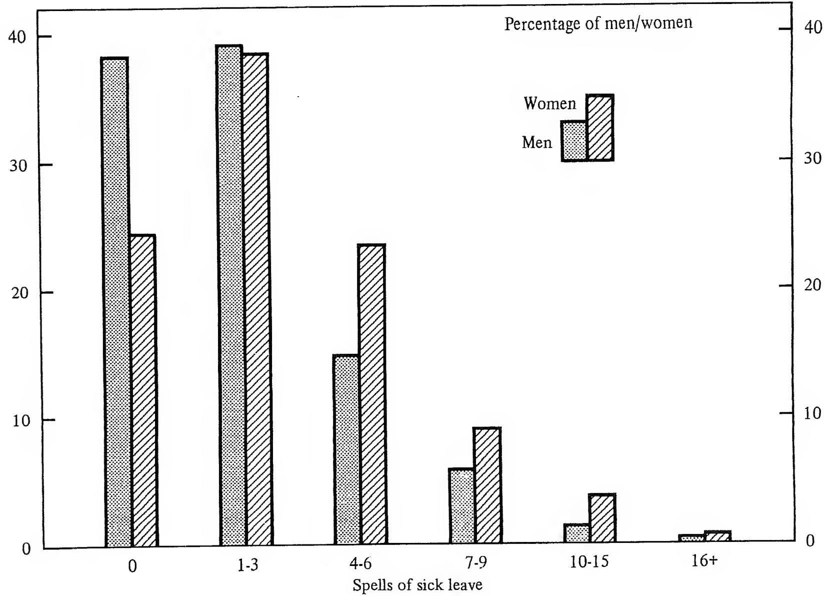


Figure C.2 Days of sick leave taken by 1,143 unestablished staff in the year following recruitment

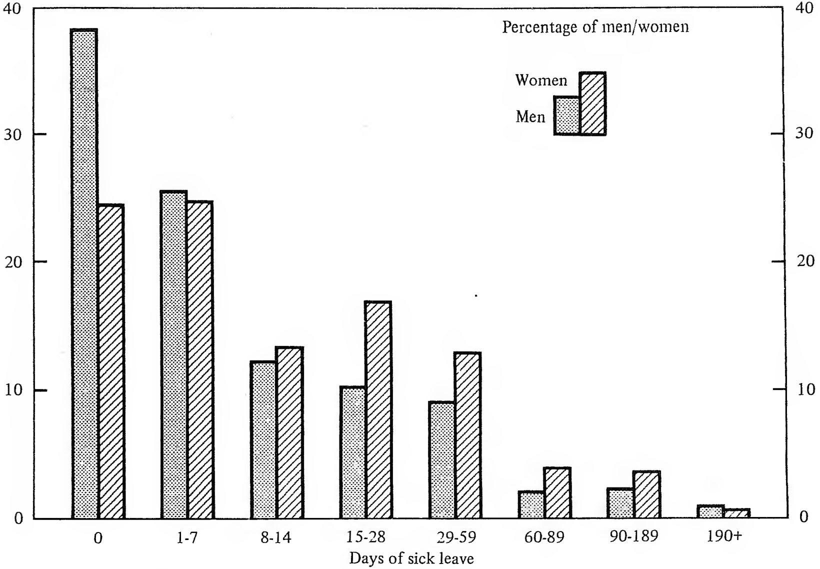
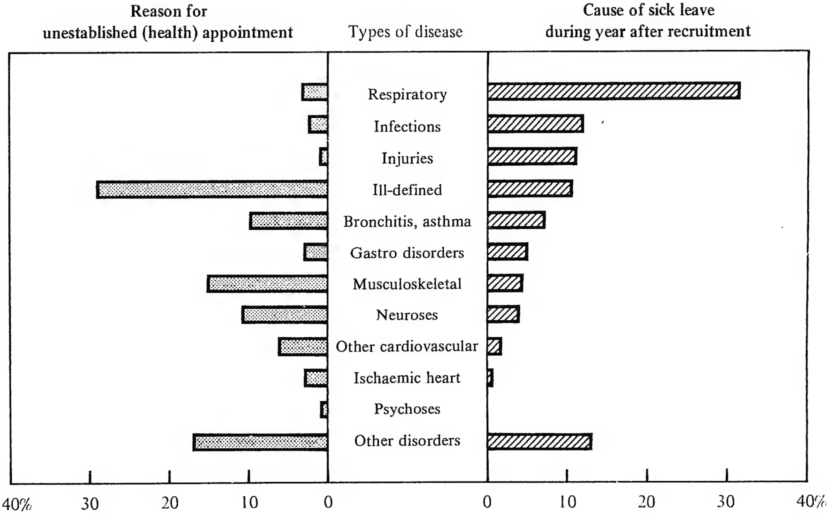


Figure C.3 Condition as a percentage of causes of all spells of sick leave 1983



APPENDIX D

SICKNESS ABSENCE

Monitoring of sickness absence

A study of the pattern of sickness of employees forms an essential part of occupational health surveillance. At one end there are special medical problems leading to an association of certain occupations with specific diseases, at the other conditions which suggest possible morale or work problems worth further study by management; and combinations of both. Taylor[19] points out that 'sickness absence is properly defined as absence from work attributed to incapacity. It is not therefore synonymous with sickness as such nor can it be used without reservation to measure the state of health or disease in a working community.' In this report 'sickness absence' and 'sick leave' are used synonymously.

Working days lost because of absence attributed to sickness should be defined. Some organisations such as the Post Office use calendar days. A 312-day working year is used for the national figures produced by the Department of Health and Social Security, so that absence from Monday to Monday adds six days to the national total even though the individual works a five-day week. Working days in the Civil Service allowing for holidays are of the order of 230 per year, and days of sickness absence refer to these. However, weekends are counted in sick leave spells that begin and end inside the working week (for example absent Wednesday, return next Tuesday counts six days, absent Wednesday return next Monday counts as three days). This inaccuracy tends to inflate the figures and is being corrected.

The development of sickness absence monitoring is a relatively recent phenomenon. Through the 1960s and 1970s, apart from some large companies, the main information obtainable in the UK has been from public services such as the Post Office, London Transport, the Civil Service and the Metropolitan Police. The first service-wide studies of sickness absence (a 5 per cent sample) were carried out in the Civil Service in the years 1967/68/69. Since then sample surveys have been carried out in a number of departments and recent examples are detailed below.

Sickness absence in Ministry of Defence establishments during 1978

The absence from work attributed to sickness of 8,023 non-industrial civil servants working in seven Ministry of Defence establishments during 1978 was reviewed. It comprised an average of 1.71 spells of absence and 7.7 days for each employee, with an average of 3.5 per cent of employees off work on any one day. During the year 1.6 per cent of employees had eight or more spells of absence and 2.8 per cent more than 45 days. Sick leave was greater in a large establishment with few recognised health hazards than in a number of smaller establishments with many, but the differences were not great and were partly accounted for by differences in the age, grade and sex structure of the study populations. (See Tables, D1 D2 and D3, pages 44–45.)

Home Office study

In 1978/79 a study was undertaken of sickness in the Home Office because of concern about an apparently high incidence of sick leave for conditions that might be stress related, such as headaches. In addition, staff who had moved into buildings with air conditioning were thought to be particularly prone to respiratory disorders.

The population consisted of non-industrial staff working in buildings within the Greater London Area, about 40 per cent of them in air-conditioned buildings. The total sickness absence of a population of some 6,500 staff was categorised using the OXMIS code[20] from general practitioners' certificates, or from the individuals' statements where the leave was uncertificated. The OXMIS coding system is based on the International Classification of Diseases (8th Revision) and the Classification of Surgical Operations (1975) of the Office of Population Censuses and Surveys expanded to include problem lists which encompass such vague diagnosis as 'unwell' or 'debilitated'. It has proved reasonably satisfactory when used by lay clerical staff after appropriate training.

The results showed the significant effects of age, grade and sex on sickness absence, which had been demonstrated in the MOD study. It was also possible to demonstrate a varying frequency of spells of sickness absence for certain conditions in different buildings. (Table D4, page 45.)

A ten-disease group classification was developed and applied to the 21,000 spells of sickness absence recorded during the Home Office 1978/79 study and also to a prospective study of 3,000 spells of absence over eight weeks in 1982. Results are shown in Table D5, page 46. Instead of the one-third or more residual diagnoses left over by other classifications the ten-disease grouping leaves only about 8 per cent. It does, of course, require initial detailed coding of sickness absence certificates and statements.

Another objective of the comparison was to determine whether a short survey (three months) would provide a reasonable estimate of the causes of absence of a group of employees over a two-year period.

Apart from the incidence of respiratory disease, which obviously varies according to the presence or absence of epidemics, only the incidence of mental disease was poorly predicted by the small sample.

Department of Trade and Industry study 1979/80

Throughout this study the ten-group classification of diseases developed during the Home Office Study and based on the OXMIS code was used to compare the incidence of disease in different Department of Trade and Industry establishments. The short list of the International Classification of Diseases (ICD) used in the MOD study proved too crude for comparisons of varying rates of disease; the ICD omits surgical operations and many other conditions appearing on general practitioners' certificates from which sickness absence statistics are derived. Any classification of diseases used for sickness absence monitoring must take into account diagnoses presented by the absentee. Many widely used classifications[21] suffer from the defect that a large number of diseases have to be coded into the miscellaneous and unspecified category.

Routine statistics of sickness absence

Besides the special studies mentioned above, statistics of sickness absence for staff on the Chessington computer system covering some 90,000 staff in 50 departments have been collected regularly. Data from Treasury and Cabinet Office populations have been used since 1979 to answer a questionnaire distributed by the Institute of Manpower Studies[22] to members of their sickness absence workshop and, as needed, to answer Parliamentary Questions.

The figures collected have been more limited in scope than those of the 1967–69 surveys, but some key comparisons can be made. (Figure D1, page 49 and Tables D6, page 47 and D7, page 48.)

The first comparison is of average number of days of sickness absence for each individual at risk, and then for each individual taking certificated or uncertificated absence (the latter replaced by self-certificated leave from 14 June 1982).

The overall average number of days lost has remained constant, being 10.4 in 1982 and 10.3 in 1983. The averages of 8.0 days for males and 13.2 days for females are also fairly typical. However, the ratio of certificated and uncertificated leave has altered. In 1968 it was 8.6 days certificated and 1.7 uncertificated. In 1983 it was 6.7 days certificated and 3.6 self-certificated. Since the introduction of self-certification on 14 June 1982 certificated sick leave has decreased and uncertificated sick leave (that is, self-certificated now) has increased.

The average number of days taken by each individual off sick (medically certificated or not) increased dramatically in 1982. This trend began in the first half of 1982, before self-certification came into force. There is some evidence of a 'settling down' effect in the figures for 1983, especially for certificated sick leave, but the new levels remain higher than the old ones. They suggest that fewer people are taking longer periods of sick leave with, however, a slight decrease in overall average.

Table D7, page 48, includes information on spells of sickness absence recorded at Chessington for the year 1983. Set against the results of the 1967–69 surveys little change is evident, except that the average number of self-certificated spells is somewhat higher than the average for uncertificated spells used to be. This suggests that it is the length of the spell which has increased rather than the number of spells being taken or the number of people taking them; indeed the latter has decreased. However, direct comparison of self-certificated and uncertificated spells is not possible.

Service-wide survey

In April 1982 a survey of departments was conducted by MAS to answer a Parliamentary Question on the amount of sickness absence in the Civil Service. The data collected are shown in Table D8, page 48. They are incomplete and may not be completely compatible with each other. However, they do suggest that the overall average for the non-industrial Civil Service may be close to the figures from the Chessington data. The Chessington average of 10.3 days sickness absence per individual at risk corresponds to 4.6 per cent working days lost from a total of 225.5 working days in 1983. This is close to the results from the four largest departments in Table D6. For the industrial Civil Service, the figure is virtually a Ministry of Defence one, and stood at 7.6 per cent in 1982. We can say that the best information we have for the whole Service is that, at any one time, an average of about 4.5 per cent of non-industrial and 7.5 per cent of industrial civil servants are off sick.

Comparisons with other organisations

The MAS takes part in a workshop organised by the Institute of Manpower Studies[22] in which samples of sickness absence data from a number of organisations in the public and private sectors are compared. Sickness absence in the Civil Service populations tends to be less than average, though the general reduction in sick leave which has been a feature of the past three years has not been so marked within the Service. Sickness absence data from most other organisations, with the exception of the Post Office, are not regularly published and detailed comparisons are difficult. In comparison with the Post Office,[6] Civil Service figures are lower, partly because of the higher proportion of industrial grades in the Post Office. The Post Office ability to hold its rates at a reasonably steady level is ascribed in part to the comprehensive procedures of control. These closely resemble those in the Civil Service, in which also the general trend to increased sickness absence over the past three decades does not appear to have occurred.

Future progress

The figures produced at present are incomplete and not wholly satisfactory. Fuller information from the computer centres will make it possible to monitor sickness absence centrally and so produce a model of sickness absence. Using this model managers should be able to assess whether the rate in their units falls within expected limits, given the age, sex and grade distribution of their staff, the type of work being done and the building in which it is being carried out. The success of the project will depend on the efficiency of future data collection exercises, and validation will be a part of the process. There must be some uncertainty about the extent of under-recording of minor spells of self-certificated sickness absence. Such under-recording is likely to remain, and be difficult to quantify, unless the recording can be linked administratively to some obvious benefit like the collection of sick pay.

Table D1: Average number of days of certificated and uncertificated sick leave (all staff)

MOD

Age	Single men		Married men		Single women		Married women		All persons	
	Cert.	Uncert.	Cert.	Uncert.	Cert.	Uncert.	Cert.	Uncert.	Cert.	Uncert.
To 19	3.3	2.3	—	—	11.6	3.5	10.0	5.0	8.4	3.1
To 24	4.2	1.9	2.8	2.8	5.7	3.2	8.3	3.5	5.5	2.6
To 29	3.9	1.7	3.0	2.0	6.5	2.2	5.6	2.9	4.3	2.1
To 34	2.5	1.5	3.9	1.8	4.6	2.6	6.6	3.2	4.1	2.0
To 39	4.1	1.2	3.4	1.6	13.7	1.8	7.5	2.5	4.4	1.7
To 44	1.7	1.8	3.7	1.3	3.8	0.6	10.7	2.6	4.9	1.6
To 49	5.3	1.0	4.5	1.3	11.4	2.4	10.6	2.7	6.3	1.6
To 54	5.7	1.2	4.6	1.2	13.1	1.5	12.9	2.4	6.7	1.5
To 59	6.6	0.9	6.2	1.2	10.2	1.6	10.7	2.0	7.3	1.4
To 64	12.6	1.3	8.2	1.4	11.4	1.3	9.1	1.7	8.6	1.5
Total	4.3	1.6	4.8	1.4	8.7	2.5	9.8	2.6	6.0	1.7

Table D2: Average days (certificated and uncertificated) of sick leave in each grade

MOD

	Male	Female	Total
Principal and above	3.1	4.1	3.2
Executive Officers	6.2	9.7	6.4
Clerical Staff	9.4	12.4	11.4
Total	6.2	11.9	7.7

Table D3: Days of sick leave, 1978

MOD

Age	Certificated* Male	Certificated* Female	Certificated* Total	Uncertificated† Male	Uncertificated† Female	Uncertificated† Total
15–24	4.7	5.2	5.0	1.8	2.3	2.1
25–34	3.3	5.5	4.2	1.5	2.0	1.7
35–44	3.3	11.3	4.2	1.3	2.3	1.8
45–54	5.3	13.1	10.2	0.9	1.9	1.5
55–64	6.0	10.1	8.5	0.9	1.7	1.4
Over 65	2.2	2.1	2.1	0.1	0.2	0.2
Total	4.6	9.4	7.2	1.3	2.0	1.7

* Supported by a certificate from (usually) the family or hospital doctor.
† No doctor's certificate.

Table D4: Average number of spells of certificated and uncertificated sick leave per 1,000 staff at risk, by condition and building

Home Office

Building Code number	Respiratory infection	Digestive disorder	Mental disorder	Headache	Total spells	Unspecified (per cent)
Men						
1	1,060 (H)	566	—	193	2,409	3
2	737	368	39	53	1,956	6
3	662	118	15	29	1,471	26
4	847	416	11	87	1,783	2
5	354 (L)	117	—	—	897	19
6–13	788 to 400	471 to 133	38 to 0	43 to 11	1,857 to 1,072	34 to 35
All men	611	245	5	42	1,336	10
Women						
1	1,671 (H)	726	96	411	3,808	4
2	678	379	46	161	2,184	21
3	622	244	33	122	1,556	16
4	1,027	547	31	218	2,532	3
5	597 (L)	254	—	164	1,642	11
6–13	1,003 to 625	471 to 204	50 to 20	220 to 74	2,583 to 1,726	44 to 45
All women	906	439	29	179	2,222	6

(H) highest (L) lowest

Certain locations had a rate of sick leave spells nearly double the average, not only for respiratory infections but also for headache and digestive disorders, suggesting a morale or work problem rather than an air-conditioning one.

Table D5: Ten-disease group classification

Home Office

The ten-disease group classification		1978/79 sample: 21,000 spells Spells	 %	1982 sample: 3,000 spells Spells	 %	Difference %	Significance of difference
1	Respiratory system	9,470	45.76	1,515	48.14	+2.38	*
2	Digestive system	4,350	21.02	636	20.20	−0.82	NS
3	Musculo-skeletal system	1,788	8.63	286	9.09	+0.46	NS
4	Mental disorders	1,483	7.17	182	5.78	−1.39	†
	Subtotal 1–4	17,091	82.58	2,619	83.21	+0.63	NS
5	Reproductive system (genito-urinary and breast conditions)	420	2.03	65	2.07	+0.04	NS
6	Heart, blood circulatory system	409	1.98	58	1.85	−0.13	NS
7	Central nervous system and sense organs	426	2.06	59	1.87	−0.19	NS
8	Endocrine, nutritional and metabolic disease	34	0.16	7	0.22	+0.06	NS
	Subtotal 5–8	1,289	6.23	189	6.01	−0.22	NS
9a.	ISAND: infective, skin allergies, neoplasms, dermatoses	312	1.51	45	1.43	−0.08	NS
9b.	MEDEX: hosp/medical exams, tests, X-rays, investigations, treatment	181	0.87	30	0.95	+0.08	NS
10	NOSPEC: other miscell. and unspecified disorders	1,823	8.81	264	8.39	−0.41	NS
	Subtotal 9a and 10	2,316	11.19	339	10.78	−0.41	NS
	Total	20,696	100	3,147	100		

* Significant at 5% level
† Significant at 1% level
NS Not significant

Table D6: Average number of days sick leave 1967–69 compared with Chessington figures 1982/83: non-industrial civil servants

Year	Sex	Overall average		Days for each individual taking certificated or uncertificated sick leave	
		Certificated	Uncertificated	Certificated	Uncertificated
1967	Male	6.6	1.2	22.4	2.8
	Female	9.8	2.0	21.8	3.2
	Total	7.8	1.5	22.1	3.0
1968	Male	7.2	1.3	22.4	2.9
	Female	10.8	2.3	22.0	3.4
	Total	8.6	1.7	22.2	3.1
1969	Male	8.0	1.5	20.8	3.0
	Female	11.1	2.3	20.8	3.4
	Total	9.2	1.8	20.8	3.2
Chessington computer centre figures					
1982	Male	5.7	2.2	43.9	4.1
	Female	10.1	3.3	44.9	6.2
	Total	7.6	2.7	44.5	5.9
1983	Male	5.1	2.9	30.4	5.0
	Female	8.8	4.3	31.9	6.2
	Total	6.7	3.6	31.3	5.5

Table D7: Average number of spells for each non-industrial civil servant taking certificated and uncertificated sick leave in 1967–69

Year	Sex	Certificated	Uncertificated
1967	Male	1.46	1.83
	Female	1.65	2.22
	Total	1.56	2.02
1968	Male	1.50	1.87
	Female	1.73	2.31
	Total	1.61	2.08
1969	Male	1.52	1.91
	Female	1.76	2.30
	Total	1.64	2.10
Chessington Computer Centre figures			
1983	Male	1.46	2.44
	Female	1.58	3.04
	Total	1.53	2.73

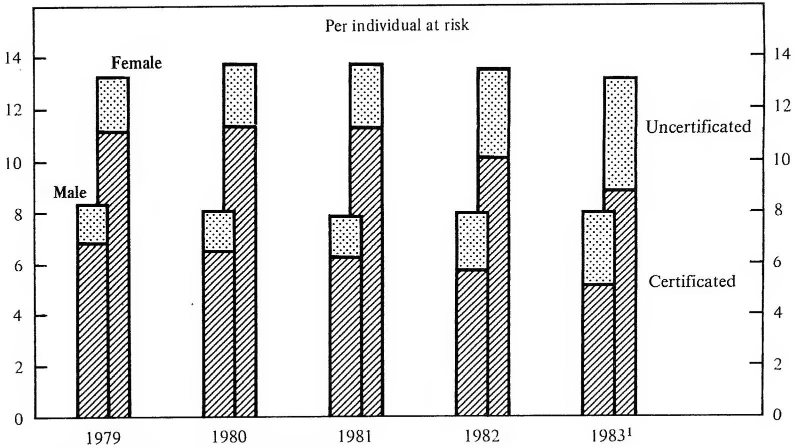
Table D8: Average percentage of sickness absence between 1977 and 1981

	Average percentage of sickness absence				
	1977	1978	1979	1980	1981
Non-industrial Civil Service					
Ministry of Defence	3.8	5.0	4.5	4.4	5.0
DHSS	4.2	4.5	4.4	4.1	4.1
Departments paid through Chessington Computer Centre			4.9	4.6	4.7
Inland Revenue	—	—	4.3	4.6	3.9*
Property Services Agency	2.7	2.8	2.4	2.6	—
Department of Transport	—	—	3.0	3.4	—
Department of the Environment	—	—	2.3	2.6	—
Department of National Savings	6.0	6.8	7.4	6.3	5.8
Industrial Civil Service					
Ministry of Defence	6.6	7.5	7.0	7.3	7.6
Royal Mint	—	—	10.4	6.9	6.4

* This figure may be inaccurate because of industrial action.

Figure D.1 Average number of days of sick leave, 1979 - 83

(Staff on Chessington computer system)



1. Since 14 June 1982 uncertificated sick leave has been replaced by self-certificated sick leave.

APPENDIX E

CASE REFERRALS TO THE MEDICAL ADVISORY SERVICE

PART 1: ANALYSIS OF CASE REFERRALS

In 1968, 108,742 cases of absence attributed to illness were referred to the Treasury Medical Service; 35,504 to Tilbury House, 30,374 to Post Office headquarters in Armour House and St Martins le Grand (both in London) and 42,864 to divisional offices in Birmingham, Bristol, Leeds, Manchester and Edinburgh. At that time there were 870,000 non-industrial civil servants, nearly half of them working in the Post Office, and the criteria for referral were sickness absence of over 42 days in a 12-month period or of 28 days in each of two successive years.

In 1983 MAS was responsible for over half-a-million civil servants and 83,000 employees of non-departmental public bodies. The present criteria for referral are that departments should consult the MAS in all cases where medical advice is felt to be useful, for example, when an individual's mental or physical condition, although not resulting in sick leave, is conducive to inefficiency or possible misconduct, or may be constituting a risk to the officer concerned or his/her colleagues, in the hope that it may be possible to prevent a drift into chronic ill health if, as a result of early advice, work is adjusted and hours of work modified or a transfer arranged.

All cases where there may be an element of risk to an individual or fellow worker, such as suspected mental disease, alcoholism or drug addiction, and infections such as pulmonary tuberculosis should also be referred. In the case of motor vehicle drivers (and others whose duties put them at risk) epilepsy, vertigo, angina pectoris, coronary thrombosis and other heart diseases and conditions liable to render an officer unfit to drive or to continue in current employment are included.

Cases of prolonged sick absence exceeding 90 days (including weekends) over a two-year period should be referred to MAS provided the department is satisfied that the officer's return to duty is not imminent and that the absences do not arise from a miscellany of unrelated causes or from causes which are not indicative of any underlying ill health. The same applies to cases where absence on maternity leave exceeds the acceptable limits. Departments are advised to refer reports of abnormally high rates of sick leave in a particular office or branch which seem to have no obvious explanation, such as an epidemic or the prolonged absence of a few individuals.

Cases for retirement on medical grounds, whether proposed by the department or the individual concerned should be referred at the earliest stage. MAS should also be consulted when a department proposes, or is requested, to reduce an officer's hours of attendance for health reasons. This is usually allowed, in order to facilitate a return to full duty following sickness absence.

Analysis of referrals

A study of all the 54,000 cases referred to MAS in 1978 showed that 26,000 were sent to Tilbury House and 28,000 to divisional offices, then located in Edinburgh, Manchester, Leeds and Cardiff. Referrals were remarkably constant throughout the year with 13,496 in the first quarter, 14,011 in the second, 13,031 in the third and 13,435 in the fourth.

Referral rates in departments in 1978 varied from 1.2 per cent to 11.9 per cent of the population at risk (see Table E1, page 52). A detailed review of the referrals in two establishments, those of Industry and Trade, showed that in some 4 per cent of cases papers were referred on seven separate occasions during the year. In 14 per cent of cases they were referred four, five or six times, in 19 per cent three times and in 17 per cent twice. In 40 per cent of cases the problems were dealt with during the visit of the departmental doctor.

Since 1978 statistics have been based on samples of four weeks' referrals. The rate for 1983 was 48,500 referrals, of which 9,967 were made to the Manchester and 3,960 to the Edinburgh divisional offices.

The grades of the civil servants whose papers were referred are shown in Figure E1. Because of the criteria set (see Chapter 4, page 8) rates of referral to MAS parallel sickness absence rates. Principal and higher grade staff have low rates of sickness absence and low referral rates. Staff below these grades have higher levels of absence and of referral.

The principal diagnosis made for each referral is shown in Table E2 (page 53). Alcoholism and related conditions were recorded in 1.8 per cent of the total diagnoses, epilepsy and related conditions in 1.3 per cent, and absenteeism in 2.5 per cent.

In 20 per cent of cases further information was obtained from the department and in 19 per cent a further report from the Welfare Officer was requested. Additionally, in 10 per cent of cases a report was sought from a consultant, in 19 per cent from a Local Medical Officer and in 22 per cent from the family doctor.

Table E1: Referrals to MAS in 1978

Industrial and non-industrial

Department	Population at risk	Referrals to MAS	Percentage of population at risk
Ministry of Defence	197,589*	10,520	5.3
Dept. of Health and Social Security	96,900	8,203	8.5
Inland Revenue	84,950	5,053	5.9
Dept. of Environment and Property Services Agency	54,600	5,498	10.1
Dept. of Employment Group	53,000†	3,500	6.6
Home Office	32,950	2,382	7.2
Metropolitan Police	15,000	1,065	7.1
Customs and Excise	28,850	809	2.7
Depts. of Trade and Industry	17,286	1,148	6.6
Min. of Agriculture, Fisheries and Food. Agricultural Research Council	15,571†	998	6.4
Department of Transport	14,583	1,118	7.7
Department for National Savings	11,152	1,332	11.9
National Savings Bank	4,500	481	10.7
Lord Chancellor's Department	10,100	595	5.9
Foreign and Commonwealth Office	9,800‡	3,322	34.0
HM Stationery Office	6,952	480	6.9
Land Registry	5,114	85	1.7
Civil Service Department	4,905	276	5.6
Dept. of Education and Science	3,780†	230	6.1
Ordnance Survey	3,864	63	1.6
Office of Population, Censuses and Surveys	2,576	86	3.3
Overseas Development Administration	2,333	110	4.7
Export Credits Guarantee Department	1,973	81	4.1
HM Treasury and Treasury Solicitor	1,507	18	1.2
Department of Energy	1,288	56	4.4
Central Office of Information	1,192	92	7.7
Royal Mint	1,434	159	11.1
Welsh Office	1,521	114	7.5
Cabinet Office	622	23	3.6
Scottish Office	10,265	506	5.0
Other Scottish Departments	2,634	89	3.4
Forestry Commission	15,000	504	3.4
All Other Departments	4,968	172	3.5

* Excludes Royal Ordnance Factories and Dockyards.

† Includes related research and other organisations.

‡ Many FCO referrals are for fitness for service abroad.

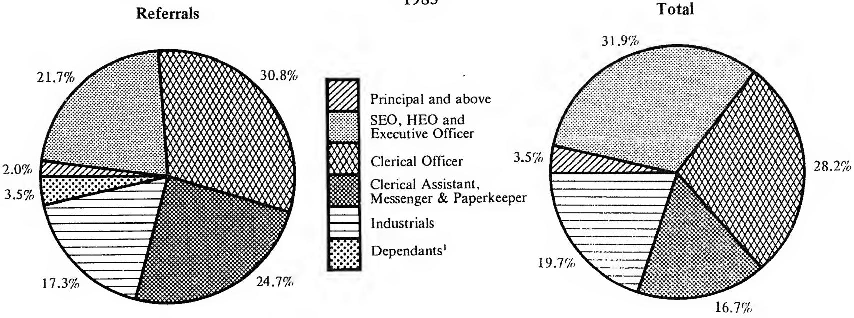
Table E2: Referrals—Diagnoses, 1983

Industrial and non-industrial

Group	Percentage of all diagnoses	
	Males	Females
Infectious and parasitic diseases	1.6	1.9
Neoplasms	2.4	5.7
Endocrine, nutritional and metabolic diseases and immunity disorders	3.0	3.3
Blood and blood-forming organs	0.2	0.6
Psychoses	3.8	3.8
Neuroses	12.6	15.9
Other mental disorders	5.0	3.0
Diseases of the nervous system	6.3	5.5
and sense organs	6.3	5.5
Hypertensive disease	3.3	3.7
Ischaemic heart disease	8.7	2.6
Cerebrovascular disease	2.1	0.8
Other circulatory diseases	2.8	1.9
Bronchitis, emphysema and asthma	2.9	2.3
Other respiratory disease	2.1	2.1
Stomach and duodenal ulcer	1.0	0.5
Other digestive system disease	3.1	2.6
Disease of the genito-urinary system	1.5	3.3
Pregnancy and childbirth	—	0.7
Skin and subcutaneous tissue	0.7	1.5
Musculoskeletal system and connective tissue	12.1	14.5
Injury, poisoning, accidents and other conditions not covered above	24.8	23.8
Totals	100	100

Figure E.1

Referrals to MAS by grade,
by comparison with total staff in post
1983



[1] Dependants are FCO families for whom the MAS provide a family doctor service. There is no corresponding figure in the Civil Service totals.

PART 2: LIAISON BETWEEN WELFARE SERVICES AND MAS

Most referrals by departments to MAS are accompanied by a Welfare Officer's report and there is close liaison between welfare and medical services. Guidelines for Welfare Officers are as follows.

Establishment divisions are normally responsible for referring cases to the MAS. The reasons include long or frequent periods of sickness absence, irregular attendance or poor work performance and inefficiency, or an adverse probation report indicating ill health or special problems, such as alcoholism, drug addiction, or social and domestic difficulties; the need for transfer, for example on account of travelling difficulties due to medical disability; the need for an opinion on the significance of illness during pregnancy or while on leave abroad or justification for compassionate leave; and the need for medical retirement.

Some departments ask for all such individuals to be seen first by the Welfare Officer. This is not invariably the case though the Welfare Officer's report is often invaluable for the Medical Adviser, and the Civil Service undoubtedly benefits from a close working relationship between the welfare and medical advisory services.

A report provided by the Welfare Officer can often obviate the need (and the expense) of further medical enquiries and can, for example, indicate that the most appropriate course of action would be to defer making such enquiries.

The information which can be obtained from the personnel record includes name, age, sex, marital status, grade, job, department, and nature of duties, category of appointment, for example, unestablished (health), date established or when probation ends and, if registered disabled, the nature of the disability. The sickness absence record and duration of current illness are also available.

The report provided should include: the place and date of interview, a description of the home setting, family and domestic details, problems, stress, financial difficulties, evidence of alcohol or drug abuse, and details of any links with psychiatric or other hospital social workers. It should include the Welfare Officer's description of the medical condition and prognosis, although the Welfare Officer is not expected to provide a formal medical history or report. Not all the points mentioned above are relevant in every case, and some individuals may not wish to discuss their illness with the Welfare Officer. In every case the Welfare Officer must have the person's consent to pass on the information obtained.

Details passed on may include the date and mode of onset of illness, with the person's account of the information given to him by the family or hospital doctor, information about treatment including drugs taken, the date of any surgical operation and the name of the hospital and consultant, the date of discharge from hospital, the date when last seen by the family or hospital doctor (giving their names), and whether there is any mention of previous episodes of illness affecting work or causing significant sickness absence.

The report on present condition should include the degree of disability, the level of activity reached, progress (whether improving, static or deteriorating), plans for further treatment, the date of the next appointment with the family or hospital doctor, the attitude to illness, evidence of co-operation with treatment, and the person's hopes of returning to duty, with information about probable duration of sick leave.

In some cases the following details may also be relevant. Is the patient in plaster, using a walking-stick or crutches? Are there any travelling or commuting problems? In the case of handicapped patients are there any physical difficulties at work—for example, stairs, access to toilets, car parking facilities? What is the patient's attitude to work, job satisfaction, colleagues or difficulties at work? In the case of mental illness a factual description of behaviour or outward signs as seen at home (or at work) is necessary.

The likelihood of resuming the same job, full-time or possibly part-time, needs to be considered as does the need for a lighter or different job, either temporarily or permanently, and the need for re-training.

Discussions about the possibility of medical retirement should not be initiated by the Welfare Officer but if the establishment division has raised this as a result of medical advice, the Welfare Officer may be asked to report on the person's attitude. If the individual asks about medical retirement, the Welfare Officer may provide information about the procedure and financial implications, but must explain that the decision will be made by management in the light of the medical recommendation.

It is important that Welfare Officers should report only factual information and identify the source of any other information or opinions quoted, for example, statements by a family doctor, nurse or relative, taking care not to express personal opinions on matters that are primarily the concern of the medical profession or other discipline.

The patient's written consent for Medical Adviser to obtain a report from the family or hospital doctor may be required.

The request for a welfare report is normally made by or via the Establishment Officer, who will expect to be kept informed about progress; but if Welfare Officers receive information which they consider should be treated in confidence and be transmitted only to the Medical Adviser, they are free to communicate it personally. The system must ensure that confidentiality is maintained without prejudicing the normal channels of communication between management and MAS.

Disciplinary problems related to unsatisfactory attendance, inefficiency, or inappropriate behaviour are matters for management and, whereas the Welfare Officer will normally be involved, collaboration with the Medical

Adviser in such cases will only be required if there is a question of medical factors playing a contributory or causative role.

Liaison with MAS is only part of the duties of the Welfare Officer who has, in addition, to fulfil a wide range of social and supportive functions.

APPENDIX F

RETIREMENT ON MEDICAL GROUNDS

Medical retirement from the Civil Service may carry considerable benefits because of enhancement of pension and the immediate payment of pension and lump sum.

The decision to implement medical retirement is one for management to make depending on medical advice and the provision of a medical retirement certificate signed by the Medical Adviser.

The certificate must state the diagnosis, that the person concerned is prevented by ill health from discharging the duties of the post and that the effects are likely to be permanent.

The Medical Adviser can obtain information by communicating with the individual's family or hospital doctor, by referring to the LMO or consultant referee or by making an examination personally. If medical retirement does not appear appropriate, the department is notified accordingly. The matter may be reconsidered if at any time fresh medical evidence comes to light.

In some cases assessment is relatively straightforward. At one end of the scale it is clear that medical retirement is justified—for example, the individual with a serious condition such as inoperable or widespread cancer, irreversible heart failure, a stroke or progressive neurological disease. At the other end of the scale the person may have a relatively minor or benign condition which is likely to respond to treatment or remit spontaneously and is therefore not eligible for ill-health retirement. In between, there are some cases that are difficult to assess, such as those with backache, depression and alcoholism, and also those with neurotic and personality disorders. Medical retirement is the result not only of failing health but also of social, economic and other factors and, of these, motivation to work and job satisfaction are of paramount importance. Thus, some with ischaemic heart disease (for example, suffering from angina) will wish to continue to work as long as possible—whereas for others it will be an indisputable reason for medical retirement. Similarly stress, either alone or superimposed on a physical disorder, may make assessment extremely difficult. In a Post Office study[23] stress at work and at home was a relevant factor in 28 per cent of people retiring on medical grounds.

The request for consideration of medical retirement may come from management, either because of the individual's prolonged period of sickness absence or frequent sickness absences and an unsatisfactory attendance record, or because of inefficiency and the possibility that this may be attributable to ill health which is not necessarily associated with a poor sickness absence record. Alternatively a civil servant, with supporting medical evidence, may apply directly.

A considerable part of the work of MAS is advising management about medical retirement and making the necessary enquiries and clinical assessment. Of the 3,923 certificates provided in 1983, 875 were issued in the Manchester and 440 in the Edinburgh divisional offices.

The total number of certificates issued for the years 1978–83 is shown in Tables F1 and F2; the non-industrial/industrial breakdown is given in Table F2 (pages 60–61).

There is a difference in the total of certificates issued by MAS and the total of civil servants[24] reported as retiring on ill-health grounds by MANDATE (the central computer-based record of basic information supplied by departments for non-industrial civil servants in the Home Civil Service). In some cases death supervenes before formalities are completed; successful appeals are not reflected in the figures; a number of grades, for example, cleaner, driver, messenger/porter, forester, may be either industrial or non-industrial and it is not always possible for MAS to distinguish between the two; Diplomatic Service retirements are not included in MANDATE figures; and part-timers are included in MAS figures. As an example of these differences, MANDATE figures for non-industrial ill-health retirements in 1983 were 2,327 whereas the MAS total was given as 2,569.

Though the number of medical retirement certificates issued in 1983 was 13 per cent less than in 1978, the change as a proportion of civil servants at work has only been a fraction of a per cent over this time. The number of applications for medical retirement rejected has varied between 7 per cent and 11 per cent during this period.

In 1983 there were 31 appeals to a Civil Service Medical Appeal Board (consisting of a chairman nominated from the panel of consultant referees and a consultant colleague chosen by the chairman). In four cases the appeal was against medical retirement and was allowed in one. In 27 cases the appeal was against the refusal to award medical retirement and was allowed in 12.

The disease groups most commonly leading to medical retirement are shown in the following table, in order of frequency.

	Male	Female
Musculoskeletal		
eg spinal disorder	1	1
arthritis		
effects of trauma		
Ischaemic heart disease	1	3

Neurosis		
eg depression, anxiety state	3	2
Respiratory disorder		
eg bronchitis, emphysema asthma	4	4
Other conditions		
eg hypertension cerebro-vascular disorder diseases of the nervous system psychosis neoplasm	5	5

Details of all diagnoses leading to medical retirement are given in Table F3, page 62.

Premature payment of preserved benefits

When a civil servant below the age of retirement leaves the Service, the pension and lump sum to which the officer is entitled because of length of service is preserved and becomes payable in normal circumstances at the age of 60. These benefits may be paid sooner if the individual's health breaks down. The criteria adopted are those for medical retirement, that is, if the officer were still serving, a medical retirement certificate could have been issued. In such circumstances only the preserved benefits are payable and there is no enhancement—as there is to the benefits of serving civil servants who retire on medical grounds.

Table F1: Medical retirement certificates issued

Industrial and non-industrial

Year	Number of civil servants	Number of certificates	Rate per thousand	Certificates issued for employees of non-exchequer bodies	Total certificates
1978	750,500	4,412	5.9	96	4,508
1979	735,014	4,246	5.8	143	4,389
1980	715,390	3,851	5.4	107	3,958
1981	698,387	3,524	5.0	113	3,637
1982	675,951	3,754	5.6	153	3,907
1983	653,519	3,762	5.8	161	3,923

The number of civil servants used as a denominator has been estimated on the basis of staff-in-post figures for both full-time and part-time staff at the beginning and end of the year.

Table F2: Medical retirement certificates issued 1979–1983

Year		Non-industrial		Industrial	
		Male	Female	Male	Female
1979	Retirements	1,233	1,230	1,422	361
	Staff in post	304,364	261,967	134,409	34,274
	Rate per 1,000	4.1	4.7	10.6	10.5
1980	Retirements	1,233	1,134	1,126	358
	Staff in post	295,732	258,831	127,266	33,561
	Rate per 1,000	4.2	4.4	8.8	10.7
1981	Retirements	1,100	1,053	1,047	324
	Staff in post	288,868	257,580	123,537	28,402
	Rate per 1,000	3.8	4.1	8.5	11.4
1982	Retirements	1,196	1,161	1,092	305
	Staff in post	280,474	254,363	114,736	26,378
	Rate per 1,000	4.3	4.6	9.5	11.6
1983	Retirements	1,261	1,308	939	254
	Staff in post	274,565	248,060	107,510	23,384
	Rate per 1,000	4.6	5.3	8.7	10.7

The number of civil servants used as a denominator has been estimated on the basis of staff-in-post figures for both full-time and part-time staff at the beginning and end of the year.

Table F3: Medical retirement: diagnoses 1978–1983

Industrial and non-industrial

Group	All diagnoses			
	Males		Females	
	Number	%	Number	%
Infectious and parasitic diseases	1,036	4.8	513	3.8
Neoplasms	419	1.9	437	3.3
Endocrine, nutritional and metabolic diseases and immunity disorders	661	3.0	433	3.2
Blood and blood forming organs	56	0.3	37	0.3
Psychoses	920	4.2	702	5.2
Neuroses	1,547	7.1	1,689	12.6
Mental retardation	155	0.7	176	1.3
Other mental disorders	416	1.9	341	2.5
Diseases of the nervous system and sense organs	1,558	7.2	903	6.7
Hypertensive disease	1,339	6.5	898	6.7
Ischaemic heart disease	3,299	15.2	879	6.5
Cerebrovascular disease	861	4.0	311	2.3
Disease of the veins, lymphatics etc	138	0.6	144	1.1
Other circulatory diseases	1,284	5.9	422	3.1
Bronchitis, emphysema and asthma	2,062	9.5	711	5.3
Stomach and duodenal ulcer	231	1.1	92	0.7
Other digestive system disease	479	2.2	386	2.9
Genito-urinary system	169	0.8	145	1.1
Pregnancy and childbirth	—	—	11	0.1
Skin and subcutaneous tissue	143	0.7	107	0.8
Musculoskeletal system and connective tissue	3,264	15.0	2,979	22.2
Congenital anomalies	133	0.6	95	0.7
Symptoms, signs and ill-defined conditions	334	1.5	180	1.3
Injury, poisoning, accidents	519	2.4	227	2.7
Total of all diagnoses (each case may have more than one diagnosis as a cause of retirement)	21,692	100.0	13,424	100.0

Table F4: Medical retirement certificates issued

Industrial/non-industrial servants

Year	Non-industrial civil servants			Industrial civil servants			Certificates issued for non-exchequer bodies	Total certificates
	Number	Number of certificates	Rate per thousand	Number	Number of certificates	Rate per thousand		
1978	575,871	2,573	4.5	174,629	1,839	10.5	96	4,508
1979	566,331	2,463	4.3	168,683	1,783	10.6	143	4,389
1980	554,563	2,367	4.3	160,827	1,484	9.2	107	3,958
1981	546,448	2,153	3.9	151,939	1,371	9.0	113	3,637
1982	534,837	2,357	4.4	141,114	1,397	9.9	153	3,907
1983	522,625	2,569	4.9	130,894	1,193	9.1	161	3,923

The number of civil servants used as a denominator has been estimted on the basis of staff-in-post figures for both full-time and part-time staff at the beginning and end of the year.

APPENDIX G

OCCUPATIONAL HEALTH—ENVIRONMENTAL ASPECTS

Since its inception the Medical Advisory Service has been concerned in both clinical and environmental aspects of the practice of occupational medicine.

In the last decade, calls for advice on environmental occupational health have greatly increased on a wide variety of subjects relating to physical, chemical, microbiological and psychosocial factors in the workplace. Resources within MAS have been deployed to respond to these increased needs for medical advice to management and employees alike.

The aim of the good employer is clearly to provide a safe and healthy workplace, secured where possible by primary prevention rather than secondary protection. The occupational physician's contribution is to advise on medical aspects of this provision, and is most effective at the planning stage of an activity.

The advent of the Health and Safety at Work Act of 1974 has also provided a statutory framework within which good health and safety practice can be developed and maintained.

The population for which MAS is responsible includes representatives of most known trades and professions as well as administrative executive and clerical staff, animal health officers, deckhands, draughtsman, foresters, veterinarians, printers, and groups unique to the Civil Service such as coastguards, Customs and Excise officers, prison officers, diplomats and members of the security services. The Department of the Environment, including the Property Services Agency, and the Departments of Trade and Industry, Energy and Employment are involved with the whole spectrum of industrial enterprise both public and private, while the Ministry of Agriculture, Fisheries and Food is involved with all aspects of agricultural, horticultural and fishing industries. There is also a wide range of both primary and applied physical, chemical and biological scientific research activity in the Civil Service which can involve the use of ionising radiation, novel chemical formulation, work with zoonotic and other infections, and genetic manipulation. This population is scattered throughout the United Kingdom and there is, in addition, a large expatriate community.

Priorities for MAS are to assess the degree of potential hazard and deploy resources for action; to formulate and apply common policies and provide scope for revision; to provide a communication network so that advice may be obtained locally while central liaison is maintained; and to provide an information service between colleagues for management and employees, which enables experience and expertise to be shared and avoids duplication of effort.

MAS concerns in environmental medicine are with medical aspects of the control of recognised hazards—be they physical, chemical, microbiological, or psychosocial as well as with identification of hitherto unrecognised hazards, their prevention, assessment and control.

Exposure data are collected by way of occupational hygiene surveys, for instance, of dust or fumes, and the results relating to employee health and risk are interpreted by the physician. Continued environmental monitoring may be needed, for instance, in lead processes, or for ionising radiation work. Such surveys are undertaken within the Civil Service by the Ministry of Agriculture (Operator Protection Group), the Laboratory of the Government Chemist and the Property Services Agency. Others are bought in from private or university occupational hygiene services. MAS undertakes biological monitoring as necessary of pesticide workers, lead workers, radiation workers and divers.

Toxicological advice is provided by MAS using established national computer databases and with help from academic and consultant toxicologists.

In carrying out their tasks, all civil service staff have need of appropriate training in health and safety matters. The Medical Advisory Service contributes to this informally in many ways, and formally with seminars for senior management and safety officers. There is clearly a need for health and safety training to match that properly provided by the trade unions for their safety representatives.

MAS continues to give advice across a wide spectrum of work activity, as the following examples illustrate.

Some recent occupational health problems

Water systems; printing works

An employee was reported as having contracted a legionella pneumophila chest infection, diagnosed when a hospital in-patient. There had been concern about an apparently higher than average sickness absence rate among staff due to acute respiratory infection in the preceding three months. The Public Health Laboratory Service, at the invitation of MAS, carried out a survey which included a review of sickness absence data, a case-control study, a bacterial investigation of all building and process water systems and air conditioning plant together with serological investigations on employees on a voluntary basis.

Investigation failed to reveal any source of legionella pneumophila or other respiratory pathogen in the building and process water systems, lubricating fluid and air conditioning equipment. Serological results were also negative.

Advice was given on the temperatures and cleaning of building and process water systems, and reassurance that no evidence had been found of work-related ill health. The confirmed case of legionella pneumonia was not found to be work-related.

Formaldehyde in air from new furniture

Administrative staff complained of mucous membrane irritation when new office furniture was put into use. An investigation was carried out by MAS and an occupational hygiene survey commissioned from the University of Birmingham Institute of Occupational Health.

Formaldehyde levels in parts of the desk were found to be between 5 and $8mg/m^3$ in air and in the desk drawer $1.11mg/m^3$ in air. The furniture was treated with a solution of ammonia. Further investigations are being pursued by the Property Services Agency in conjunction with the manufacturers.

Intensive poultry production units: exposure of Ministry of Agriculture advisers to dust and fume

Scientific and advisory officers of the Ministry of Agriculture are required to visit such units in the course of their work. Officers may need to work under the hen houses in the compartment designed to collect droppings. Dust-in-air levels can be considerable, particularly under the hen houses. Ammonia-in-air levels are significant (up to 400 parts per million) especially in winter time when ventilation levels are reduced to conserve heat.

MAS advised that data be collected on dust-in-air levels and ammonia-in-air levels in 'worst cases' and appropriate advice be given on suitable respiratory protection. An occupational hygiene survey was undertaken by the Operator Protection Group of the Ministry of Agriculture (Harpenden Laboratory).

The mean concentration of particles collected at breathing height inside the hen house was 5,500 per litre (by Cascade Impactors). 65 per cent of particles were of respirable size (less than 0.3 microgrammes). Ammonia-in-air levels were:

(a) in the hen house—mean $37mg/m^3$; and

(b) under the hen house—mean $59mg/m^3$.

Concentrations over $40mg/m^3$ are found to be irritant. Hydrogen sulphide levels were not taken since, in previous work, levels of less than 0.5 ppm were found under a hen house.

The greater potential hazard appears to be from dust in air, in developing sensitivity to airborne organic matter and to possible zoonotic infection. Respiratory protection against both dust and ammonia has been advised, and discussions are taking place on the need for a filter to use in conjunction with a particle filter which will give adequate protection against both dust and ammonia for longer periods. Currently none are available.

The Operator Protection Group tested the efficiency of various dust particle filters meeting the BS 2091 Type B filter specification or its equivalent for their effectiveness in protecting against ammonia. One such mask gave protection in the conditions described for up to one hour.

These findings also have a bearing for work in intensive pig rearing units.[25]

Use of diphenyl methane isocyanate (MDI): land drainage specialists

MDI is used for making casts of 'mole' drainage channels to study the characteristics of these man-made channels during the course of time, changes of season and in different soils.

In order to advise on appropriate skin and respiratory protection, an occupational hygiene survey was undertaken at the request of MAS by the Operator Protection Group, Harpenden Laboratory.

As a result of this work[26] it was shown that:

(a) the use of a 'one-shot' discharge of a polyurethane foam mix into the drainage channel from a pressurised can reduced levels of MDI in air to less than 0.006mg/m^3 in the breathing zone of operators during cast-making and curing processes. No aerosols were discharged when used according to the manufacturer's protocol. This method was substituted for the previously used two-component pack, reducing the need to handle unreacted MDI liquid preparations.

(b) MDI component liquid was capable of penetrating polythene gloves. The use of more resistant synthetic rubber gloves was advised.

Metallic mercury residues: research laboratory

Following complaints from non-scientific staff who were accommodated in a former laboratory where metallic mercury had been used MAS conducted an investigation. Environmental monitoring revealed only minute traces of mercury. Despite this, staff continued to complain of peculiar sensations affecting their tongues and gums. Blood and urinary mercury levels were checked in the population concerned. The highest recorded level in the tests was 20nmol/l in blood. 95 per cent of the normal population have amounts less than 28nmol/l in their blood. No evidence was found to support the view that there had been exposure to significant or dangerous concentrations of mercury. Tap water was also sampled for mercury content and none was found.

Other examples of subjects investigated 1980–84

(a) *Chemical*
Medical aspects of: work with isocyanates, carbon disulphide, ethylene oxide, ether/petroleum ether in solvent extraction, selenium, cadmium, formaldehyde, chromic oxide, silver-impregnated microfiche, PTFE, residues in alcohol methylation, diesel oil and petrol, aviation fuel, fingerprint powder, osmium tetroxide, acrolein, cyanide, hydrofluoric acid, sheep dips, organophosphorus pesticides, inks and varnishes, metallic lead, metallic mercury, organic mercury, asbestos, and man-made mineral fibre.

(b) *Physical*
Medical aspects of: work with ionising and non-ionising radiations; heat, cold, noise, vibration; pacemakers and radio frequencies; 'comfort' in air conditioning; humidity; ultra violet and infra red light; diving work and mast and tower work; visual display units (VDUs) and computer printers; lifting and handling; and lift shaft dust.

(c) *Microbiological*
Medical aspects of: work on zoonoses in animals (for example, tubercle, anthrax, salmonellae, campylobacter, ringworm, leptospiroses, brucellae, chlamdyias, orf, rabies); prevention of tetanus, poliomyelitis, typhoid; insectories, animal houses, pig, poultry units and stock units; grain and animal feed handling; veterinary post mortem rooms, microbiological and genetic manipulation laboratories; investigation of humidifier fever and legionnaires disease.

APPENDIX H

CIVIL SERVANTS ABROAD

As travel becomes easier and more rapid the supervision of the health of civil servants working overseas takes up an increasing proportion of MAS resources.

Though diplomatic service staff have been reduced from 8,140 to 6,527 since 1968[27] some 3,000 serve overseas and there is a similar number of Overseas Development Administration staff and advisers, together with about 500 representatives working for the British Council and Crown Agents. In addition, many home civil servants are seconded to diplomatic missions or make visits overseas on short tours for other purposes. Examples include immigration specialists from the Home Office; representatives from the Department of Trade and Industry working in commercial sections of our missions; Treasury officials travelling to EC administrative centres or to the World Bank; Ministry of Defence civilian staff seconded to work overseas and scientists of a wide variety of disciplines travelling in pursuance of their departments' interests.

The health care of civil servants abroad is unique in one respect for it is only when staff are serving overseas that MAS, an occupational health service, has responsibility for the care of their families. In many parts of the world provision of health care is deteriorating as a result of economic difficulties and political unrest. At the same time people's expectations have risen. For example, a couple serving in one of the developing countries might wish their infertility to be investigated to the same sophisticated level as in the United Kingdom.

The role of MAS in the care of the Overseas Civil Service falls into five main areas:

1. selection of staff and families with appropriate health standards for the post;
2. supervision and advice on primary medical care facilities for staff and their families overseas;
3. arranging medical evacuation when the need arises;
4. provision of primary medical care for staff and their families in transit; and
5. provision of health advice to travellers.

The selection of staff of appropriate standard of fitness for service overseas is based on the nature of the work to be undertaken, the level of health of the candidate and the medical facilities in the area of the world under consideration. The first of these requirements can be fulfilled by background knowledge of the nature of the enterprise, supplemented where necessary by a detailed description of the task. The standard of health of the officer is assessed by a questionnaire which can be supplemented where necessary by clinical examination. Staff and spouses over the age of 40 undergo at prescribed intervals multiphasic health screening. This provides valuable data at an age when health problems are more likely to arise and at the same time give some reassurance to those who may have given long service in difficult overseas posts. The medical facilities of these posts are kept under review by the welfare section of the Foreign and Commonwealth Office working closely with MAS staff with recent knowledge of the area. (In many parts of the world circumstances change rapidly and knowledge of medical facilities in a particular post acquired only five years earlier can be out of date.)

Though the health of an officer may match the needs of the post and particular job, the situation can be complicated by a health problem existing in the family. To post to a remote part of the world a family in which there is a child with developmental problems, requiring skilled assessment and treatment, can lead on the one hand to considerable expense and to deprivation and unhappiness on the other. Adequate consultation must occur between central and local management, the family and their medical advisers before a decision is reached.

In general, when overseas, civil servants depend upon the medical resources of the host country. However, in three posts—Moscow, Warsaw, and Delhi—British general practitioners are employed as part of the embassy staff. In the High Commission in New Delhi there is a small but well equipped cottage hospital with facilities to care for most straightforward medical and surgical conditions.

In some posts where primary care medical facilities are lacking it has been useful to employ British nurses attached to the embassy. Sometimes these can be recruited from the wives of officers or other expatriates serving overseas. In Peking and Islamabad nursing sisters are seconded from the Royal Air Force for a tour of duty.

For the isolated overseas aid worker or field research team there is no alternative but to rely on what facilities exist. In areas such as rural Sudan or the forests of Guyana these may be rudimentary and difficult to reach. In larger centres medical facilities vary from polyclinics in some socialist countries to expensive private medical facilities in others. Wherever possible diplomatic missions try to build up a panel of local doctors who will provide staff with a choice of physicans of sound reputation, who have good contacts with the local hospital services, have the ability to speak English well and who understand the United Kingdom medical system. Many of these panel doctors have had post-graduate experience either in Great Britain or the USA.

Where there is serious illness or injury involving an officer or a member of the family overseas, a decision is required as to whether treatment can be satisfactorily undertaken at the post or whether evacuation to another medical centre is indicated. Factors that need to be taken into account include not only the nature of the ailment, the standard of local hospital facilities and the expense involved, but also more mundane but nevertheless important matters such as the nature of accommodation and level of domestic support available. It is little help to a family to recommend that major surgery be undertaken in the United Kingdom if their home is let to tenants and there are no relatives nearby to care for the patient in the post-operative and convalescent phase. In many overseas posts families enjoy more domestic support than they are likely to have at home, and when there are young children this factor weighs heavily when deciding where treatment should be undertaken.

Unfortunately now and again acute emergencies arise that cannot be treated adequately in the locality; or long-term advanced treatment for some medical conditions proves necessary. In these circumstances evacuation by air is arranged in conjunction with the administration and welfare services of the employing department. Where time and the clinical condition allows it is possible to evacuate the patient, accompanied by a relative, friend, nurse or doctor (according to the need), by scheduled airline. Where the patient's condition is more serious, transport by air ambulance with nursing and medical support can be arranged within hours of receiving a request. When evacuation is to the United Kingdom, MAS arrange the assessment and admission of the patient with the hospital authorities concerned. Some posts with a lack of particular medical facilities, or for security reasons, have a standing arrangement for medical problems to be dealt with by neighbouring states. Helsinki provides additional medical support for our staff in Moscow, Miami for families in some Caribbean countries, and Bangkok and Hong Kong for some South East Asian countries. The evacuation of a patient causes considerable operational problems for the post and social problems for the family. By working in close contact with the departmental welfare services many of these problems can be minimised and the stress to the patient and family reduced.

One of the most difficult situations in which overseas staff find themselves is when they need medical advice or attention but are in transit in the United Kingdom for only a short time and may not have an opportunity to re-establish contact with their family doctor. Here MAS helps by offering advice, arranging consultations with specialists or hospitals and tries to establish some continuity of care. It is particularly hard for overseas civil servants with chronic conditions. Intermittent lengthy periods of overseas service makes it progressively more difficult to maintain uniformity of advice and continuity of care. Despite all the strengths and benefits of the National hospital service it is sometimes difficult to fit into the system patients arriving from overseas with non-urgent conditions such as orthopaedic or infertility problems.

As a consequence the Medical Adviser is seen by overseas departments as a sort of departmental family doctor who has, in addition, an insight and understanding of the particular difficulties of a peripatetic life.

With the large amount of overseas travel undertaken by civil servants it became clear some years ago that it would be desirable and convenient to have an immunisation clinic in central London. The great proportion of the 3,000 individuals who are examined, vaccinated and immunised annually at MAS headquarters in Tilbury House are going to live and work abroad, and briefing them adequately about health matters is a major concern for MAS. This daily clinic in Tilbury House has proved to be a most useful facility, and the staff have developed considerable expertise in advising travellers on changing immunisation needs and requirements for malaria prophylaxis.

Contact between the Nursing Adviser and the individual has provided a useful opportunity for health education. MAS contributes more formally to health education in 'going abroad courses' and training programmes for line managers on the common health and stress-related problems of expatriate life.

A computer-held database on medical circumstances overseas, co-ordinated by the London School of Hygiene and Tropical Medicine and the Royal Army Medical College at Millbank, will shortly become available to MAS and will supplement the information MAS already currently obtains from the World Health Organisation, the Department of Health and Social Security and other sources.

APPENDIX I

RESEARCH

PART 1: MEDICAL RESEARCH IN CIVIL SERVICE POPULATIONS

Sir Henry Bashford, the Chief Medical Officer of the Post Office was appointed first Treasury Medical Adviser in 1948 to combine the new Treasury Medical Service with the old established Post Office Medical Service. Access to a 'captive population' of more than half a million working people of both sexes between the ages of 16 and 65 gave opportunities for studies in social medicine on an even greater scale than those previously carried out by the Post Office Medical Service, especially as this captive population included representatives of the majority of occupations in the United Kingdom.

In 1948, the then Ministry of Labour and National Service sought guidance on the implementation of the Disabled Persons (Employment) Act 1944. A few years later the Medical Research Council carried out a large-scale investigation into the prevention of the common cold using an experimental vaccine. These studies, directed by Dr V C Medvei of the Treasury Medical Service, demonstrated the need for further research into the causes of excessive sickness absence in the Civil Service. Chronic bronchitis was a major cause, post offices with a large percentage of middle-aged staff being particularly affected. A survey was made over 20 years of some 3,000 civil servants in the Greater London area suffering from recurrent attacks of bronchitis. In 1953 the proportion of people having respiratory symptoms was found to be significantly higher among smokers than non-smokers and the risks associated with cigarette smoking were identified.

In 1958 a clinical service for the Foreign and Commonwealth Offices was developed by the Treasury Medical Service. Links with the London School of Hygiene and Tropical Medicine were fostered and strengthened by Sir Walter Chiesman's successors—Sir Daniel Thomson and Dr Blair Harrington—and led to the development of the Whitehall and Leisure Activity studies.

The Whitehall study

The Whitehall study set out in 1968 to ascertain factors which predict cardiorespiratory disease in male civil servants: 18,403 men aged 40–64 working in Whitehall departments who completed a questionnaire were medically examined and followed up since that year. The association of cigarette smoking, raised blood pressure and blood glucose with an increased risk of premature death from coronary heart disease, was demonstrated. Analysis of mortality figures revealed that subjects in the lowest employment grade (predominantly messengers) had a coronary heart disease rate 3.6 times that of subjects in the highest grade (the administrators). Intermediate employment grades had intermediate risks of death from coronary heart disease.

In 1978 a new study was set up to investigate further the reasons for the employment grade differences in coronary heart disease. A sample of 1,274 male and female employees of the Department of Environment were sent health screening questionnaires and invited for examination. New fields of investigation included measurement of clotting factors and self-measurement of blood pressure at work and at home, measurement of genetic factors including blood group, and the examination by psychosocial questionnaires of the role of factors such as personality type and job satisfaction in the development of coronary heart disease.

The Leisure Activity study

The Leisure Activity study undertaken by Professor J N Morris and his colleagues in the London School of Hygiene and Tropical Medicine set out to study in particular the role of exercise in the causation of coronary heart disease and the possible contribution of exercise to its prevention. In the first round of the enquiry between 1968 and 1970 17,944 male Executive Officers aged 40–64 from the Ministry of Agriculture, Fisheries and Food, The Department of the Environment (Ministry of Transport), the Department of Employment, the Department of Education and Science, the present Department of Health and Social Security, and Inland Revenue provided a five-minute by five-minute account of how they spent two unannounced sample days. These men were followed up since, and a sub-sample of 509 living in 12 towns in early 1970 were visited and examined by a doctor and nurse. In 1976/77 questionnaires were returned by 10,236 Executive Officers born before 1931 in the Departments of Health and Social Security and Inland Revenue, three-quarters of whom had participated in the first round in 1968/70. Then in 1982/83 questionnaires were sent to close on 5,000 of the men who had participated in the first and second surveys and were now retired. This is now the largest study anywhere in which a group of men has been followed from work into retirement.

The study has shown that, overall, average levels of physical activity have little, if any, protective effect against heart disease. What does seem to protect are bouts of vigorous exercise such as swimming, tennis, hill climbing, keep fit exercises and, to a lesser degree, the heaviest work carried out in the house, garden and garage. Only 1.1 per cent of men who reported vigorous sports and the like during the study days died of coronary heart disease in over eight years of follow-up compared with 2.9 per cent of the men who did no vigorous exercise. This drop in death rate was not accompanied by a rise in other causes of death such as cancer. The vigorous activity group tended to smoke rather less than the other groups but the effects of the two factors were largely independent, so that men who took adequate exercise and did not smoke had particularly low heart attack rates. There is no evidence that it was because some men were already suffering from heart disease (and therefore more likely to die of it), and on account of this did not undertake vigorous exercise during the study days, that these differences in development of heart diseases occurred.

Following the success of these two surveys, the Medical Advisory Service decided to enlarge the scope of its screening activities in the 1970s. Research into the major causes of premature death and disability was still the primary goal but, in addition, the feasibility of extending screening throughout the Civil Service was investigated and women were also asked to participate. These were the origins of the London Survey.

The London survey

Between July 1975 and December 1978 53,600 questionnaires were dispatched to male and female civil servants aged between 35 and 55 working in London. Fifty-six per cent of them were returned and as a result 5,300 men and women were asked to attend for examination in Tilbury House. The only unequivocally useful result of the London Survey was the detection of undiagnosed hypertension in middle-aged men. The take-up of cervical cytology facilities was particularly low, for example, in women at greatest risk.

Civil servants with particular risk factors were indeed identified during the survey. Of each 1,000 examined 29 were found to have angina, 27 had electrocardiographic changes, 14 had chest disorders, 12 had raised cholesterol levels, 11 had a peptic ulcer, ten had evidence of an alcohol problem, seven had circulatory problems and two had undiagnosed diabetes. Follow-up studies have, however, shown that recognition of the disorder and appropriate intervention have not apparently affected the outcome.

Further studies are being made on alcohol intake linked wih measurements of liver function. MAS is co-operating with Professor Tom Whitehead's department in Birmingham on the identification of individuals in whom alcohol abuse is especially harmful.

A study of individuals who at preliminary screening were found to have a high alcohol intake and abnormal liver function tests is continuing. Their job performance is being compared with a matched control group who at preliminary screening were teetotal and had normal liver function.

The number of requests from departments for advice on occupational health matters has increased rapidly since the introduction of Health and Safety at Work legislation. The wide-scale epidemiological studies of the 1960s and 1970s into cardio-pulmonary, mainly non-occupational disease, have continued and, in addition, studies of the hazards specifically associated with employment in the Civil Service have been instituted.

From an occupational point of view the Civil Service can be divided into three parts with different levels of occupational risk.

Low risk occupations

Clerical, administrative and managerial tasks occupy the majority of civil servants, who thus constitute a homogenous group at low risk. The occupational health problems of this group are those of establishing a comfortable working environment compatible with optimum efficiency, with attention focused on environmental and ergonomic factors such as heating, lighting and ventilation. Occupational health surveys on this group at low risk include a study in conjunction with the Department of Community Medicine, Charing Cross Hospital Medical School, of the prevalence of headache in members of the Lord Chancellor's Department based in central London.

Air conditioning plants in large office blocks are often criticised; increasing noise levels from office machinery can cause problems and the introduction of visual display units (VDUs) has underlined the special needs of unit users.

Use of VDUs in the Civil Service

Early concern about adverse health effects of using VDUs and the belief that eyesight screening was essential have been shown to have no medical basis. Nevertheless, since 1976 MAS has been involved in screening exercises to confirm that hazards to eyesight through use of VDUs do not exist. These projects have been carried out with the close co-operation of civil service unions and results have been publicised.[28]

MAS has worked closely with research studies promoted by HUSAT Research Group, University of Technology, Loughborough and with the Central Computer and Telecommunications Agency. In 1981 the University of London made a videotape with the help of MAS about the problems of VDUs and the need for eyesight testing. This has been shown to unions, management and staff wherever possible and is also available on loan or purchase from the University.

On occasions, users of microfiche equipment have been bothered by eyesight problems. In co-operation with the unions, MAS is involved in two surveys of microfiche operators in DHSS and the Department of Trade and Industry.

Up to December 1983 about 20,000 VDU operators have been screened by MAS. No hazard to eyesight has been found, and it is likely that all cases where special glasses were necessary would have come to the notice of management without individual eyesight screening.

VDUs and pregnancy

It is now generally accepted that VDUs pose no threat to vision but there is anxiety about their effects on the reproductive system and studies are being conducted world-wide to look into a possible connection; none has demonstrated adverse effects.

MAS undertook a study in 1982 of VDU usage by data processors in Runcorn in response to anxieties expressed about a high rate of miscarriages among operators there. Reports of 169 pregnancies in 803 women over a nine-year period were analysed. The rate of miscarriage of pregnancies in women working with VDUs around conception (14.5 per cent) was comparable to the estimates of the 'normal' incidence of spontaneous abortion, which vary widely, from 7.8 per cent to 14.5 per cent of conceptions. Differences in still-birth and foetal malformation rates between case and control pregnancies were not significant.

Because of the understandable concern felt by pregnant women about this aspect of the use of VDUs, MAS is continuing its research in this area.

Occupations with specific hazards

Another part of the Civil Service includes groups of employees each with one or more specific occupational hazards, often working in an industrial or semi-industrial setting. Examples are in the Stationery Office, with its printing and reprographic problems, in the coastguard service with the associated problems of cliff rescue; or in the Forestry Commission where chainsaws carry risks of accident and of vibration-induced physical damage.

Vibration white finger

The repeated use of vibrating hand-held tools causes in a proportion of susceptible individuals a condition known as vibration-induced white finger. Two groups of industrial civil servants are at risk: men using chipping and riveting hammers in the naval dockyards, and forest craftsmen using chainsaws and employed by the Forestry Commission. The men in the dockyards are reviewed by the Occupational Health Service of the Royal Navy. In the Forestry Commission, which has pioneered an antivibration handle, there has been a reduction in the numbers affected and in the severity of the condition.[29] However, even with the most modern equipment a significant proportion of men will sooner or later develop white finger. In addition to monitoring the effects of vibration, steps are now being taken in an attempt to identify groups of individuals who may be more than usually susceptible. If it is possible to identify this group at recruitment or before training for chainsawing duties, a further reduction in the incidence of this condition may be achieved.

MAS is also involved, in conjunction with Rolls Royce, Guest Keen and Nettlefold, and the Forestry Commission, in a study funded by the Health and Safety Executive to develop and test a vibrometer, intended to provide a quantitative assessment of vibration-induced white finger.

Hepatitis A antibodies

Though the risks of serving abroad can be considerable and vary very much according to the location, there are some specific hazards, such as malaria which are of particular concern. Another is hepatitis A, which is widespread in some countries abroad and, although virtually never fatal, can in a limited proportion of cases be prolonged and debilitating. The indiscriminate use of immunoglobulin in its prophylaxis has, from the beginning, been of concern to MAS. As standards of hygiene improve, the proportion of people in the United Kingdom with naturally acquired antibodies decreases and the question of protection against the disease abroad becomes of greater consequence (Table 11, page 79).

The rate at which immunity is acquired abroad and the frequency of immunoglobulin injections necessary are of general interest. A study based on the High Commission in Delhi, in conjunction with the London School of Hygiene and Tropical Medicine, was abandoned in 1981 because of defects in the cold chain arrangements for sending blood specimens to London but will be revived when possible.

Occupations with multiple hazards

Lastly there is the heterogeneous group of specialists in scientific and technological departments comprising the Scientific Civil Service. Their range of work extends from agriculture to zoology and from atmospheric to oceanographic investigations; no single industrial concern can match the breadth of expertise and technology or the range of occupational health hazards in the scientific civil service. Some of them present particular occupational health problems, and a study of the risks of zoonoses in the veterinary staff of the Ministry of Agriculture, Fisheries and Food and the Institute for Research in Animal Diseases was published in 1982.[30]

Audit of occupational health programmes

The health at work of industrial civil servants working in the naval dockyards is the responsibility of the Ministry of Defence (Navy), and generally their non-industrial colleagues also look to the Naval Medical Services for advice on health and safety. Similarly, 52,000 non-industrial and 35,000 industrial employees working in a number of Ministry of Defence (Procurement Executive) establishments are supervised by the Directorate of Civilian

Medical Services (MOD (PE)). There are different occupational health programmes in the three sectors, MOD(N), MOD (PE) and the remainder of the Civil Service, and the supervision of the health at work of scientific workers by MAS differs greatly from that of its scientific staff by DCMS (MOD (PE)). At a time of general interest, in the European Community as well as in the UK,[13] in the provision of health and hygiene services at work, it seemed opportune to exploit these differences in approach and try to assess the contribution of each to measures of outcome. The Department of Occupational Health of the University of Birmingham and the Department of Health and Business Economics of the University of Lancaster are making a pilot study, funded by the European Community, of the National Physical Laboratory (under the aegis of MAS) and the Royal Armament Research and Development Establishment at Chertsey (under the aegis of DCMS, MOD (PE)) to see if reliable measures of outcome can be ascertained. Those being measured include rates of sickness absence, medical retirement, deaths in service, prescribed disease and compensation claims and, what is said to be the acid test of an occupational health programme,[31] whether the employee is familiar with the hazards to which he is exposed and with the measures to be taken to deal with them. A report is expected by the end of 1984. It will be of particular benefit to MAS in assessing the type of occupational health programme best suited for organisations in the Civil Service with mixtures of hazards, and the size of the medical, nursing and safety and hygiene components in them.

Studies based in the Civil Service offer a number of advantages to epidemiologists and to occupational health physicians. It provides a large and relatively stable workforce which is more likely to be representative of the general population than employees at large, comprehensive documentation and a well-defined employment grade structure, together with the co-operation of a management and staff who realise the importance of research.

Table 11: Hepatitis A antibody results: headquarters clinic, 1982 and 1983

Age in years	Number screened	Number hepatitis A positive (%)
30 and under	152	27 (17.7)
31–45	773	313 (40.5)
Over 45	773	447 (57.8)
Total	1,698	787 (46.3)

APPENDIX J

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